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# The Trans-Mississippi West 1804-1912

## Part III

A Guide to Records of the Department of Agriculture for the Territorial Period

Compiled by Robert M. Kvasnicka

National Archives and Records Administration

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A Guide to Federal Records for the Territorial Period

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A Guide to Records of the Department of Agriculture for the Territorial Period

Compiled by Robert M. Kvasnicka

National Archives and Records Administration
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# PREFACE

With this volume the National Archives and Records Administration continues its publication of a major research aid, "The Trans-Mississippi West, 1804-1912: A Guide to Federal Records for the Territorial Period." This multi-volume guide is intended to succeed the previous letterpress and microfilm publication of documents constituting *The Territorial Papers of the United States*. Rather than providing transcripts of selected documents, the guide, when completed, will identify and describe the significant series of civil and military records relating to the contiguous States and Territories carved out of the area west of the Mississippi River. It will inform researchers of the nature of available Federal records and their location, whether in the Washington, DC, area or in regional archives.

Guides such as this one have been prepared at the National Archives since 1940 when the first *Guide to the Material in the National Archives* was published. Over time, new editions of this general guide have been published, and supplementary guides have been issued that focus on specific portions of Archives holdings. In this latter category are the *Guide to Federal Records Relating to the Civil War* (1962), *Guide to the Archives of the Government of the Confederate States of America* (1968), *Guide to Materials on Latin America in the National Archives of the United States* (1974), *Guide to Records in the National Archives of the United States Relating to American Indians* (1981), *Black History: A Guide to Civilian Records in the National Archives* (1984), *Guide to the Holdings of the Still Picture Branch* (1990), and most recently *American Women and the U.S. Armed Forces: A Guide to the Records of Military Agencies in the National Archives Relating to American Women* (1992). Also compiled by National Archives staff but published privately is *Documenting Alaskan History: Guide to Federal Archives Relating to Alaska* (Alaska Historical Commission Studies in History No. 23, University of Alaska Press, 1982). All of these publications are designed to make the records in the National Archives better known and easier to use.

The publication of this third volume of the guide, focusing as it does on records of the Department of Agriculture, is intended to alert researchers interested in the American West to the research potential of records created by the agencies of a Federal Department whose work, since its establishment in 1862, has served Americans in all regions of the national domain. The records described in this volume document the ways in which the Department accomplished its mission and indicate its broad impact on the people and lands of the trans-Mississippi West.

JOHN W. CARLIN
Archivist of the United States

# INTRODUCTION

The interest of the scholarly community in documenting the westward expansion of the United States was recognized as long ago as 1911 when the Carnegie Institution of Washington published David W. Parker's *Calendar of Papers in Washington Archives relating to the Territories of the United States (to 1873)*. The noted historian and editor J. Franklin Jameson began his preface to Parker's work by stating that archives could be exploited "for the general benefit of historical students" in three ways:

> The first process is that of the preparation and publication of summary guides, describing in general terms the contents of domestic or foreign archives. The second step is the preparation and publication of minuter descriptions, calendars usually, of some selected archival division or some special class of documents having sufficient importance to warrant treatment so detailed. The third stage of operation is the preparation and publication of important series of documents in full text.

The title of Parker's publication, of course, clearly identifies it as an example of the second step.

Under the provisions of the Ralston Act of March 3, 1925, the Department of State launched an ambitious project that met the objectives of Jameson's third stage: the preparation and letterpress publication of papers relating to the Territories. The first volume of *The Territorial Papers of the United States,* compiled and edited by Clarence Edwin Carter, was published in 1934. By 1950, when the project was transferred from the Department of the State to the National Archives and Records Service, General Services Administration, volumes II through XIV, XVI, and XVII had been published. Under the auspices of the National Archives, Carter and his successor, John Porter Bloom, published volume XV and an additional 11 letterpress volumes; the general editorial materials compiled for inclusion in the unpublished volume I of the series were filmed in 1972 as Roll 1 of National Archives Microfilm Publication M721, *The Territorial Papers of the United States* (16 rolls). In addition to the unpublished materials, the microfilm publication includes reproductions of volumes II through XXVI. Not included in the microfilm edition are letterpress volumes XXVII and XXVIII covering Wisconsin Territory. The latter volume, the last letterpress volume issued in the series, was published in 1975.

By the time Wisconsin became a State in 1848, the quantity of material relating to the individual Territories had increased to such an extent that the letterpress volumes for Wisconsin were supplemented by a microfilm publication (M236) of pertinent documents that totaled 122 rolls of film. A microfilm edition of papers for Iowa (M325, 102 rolls) and less comprehensive editions for Minnesota (M1050, 19 rolls) and Oregon (M1049, 12 rolls) were issued after 1975, but work on additional letterpress volumes was suspended.

Since the sheer volume of pertinent materials, combined with high production costs, rendered the comprehensive publication of individual documents for the Territories impractical, the National Archives sought other ways of continuing the Territorial Papers project. In 1989, after consulting with concerned representatives of the historical and scholarly communities, the Archivist of the United States authorized a project exemplifying Jameson's first stage, the compilation of a guide to provide information about those holdings of the National Archives and its regional archives that relate to Territories not covered by *The Territorial Papers*. In developing the prospectus for the guide, the "territorial papers" concept was more or less discarded in favor of an approach that would provide more uniform coverage. The scope of the guide has been broadened to include all Federal records created during the period bracketed by the Louisiana Purchase in 1803 and the admission of New Mexico and Arizona to the Union in 1912 that relate to all of the contiguous States west of the Mississippi River. This change in concept allows for

coverage of Texas, California, and Indian Territory, areas that did not pass through the formal Territorial period prior to statehood. It also means that the guide will provide a general view of records relating to some States that are already covered by *The Territorial Papers* letterpress volumes, as well as to those that are not.

The objective of "The Trans-Mississippi West, 1804-1912: A Guide to Federal Records for the Territorial Period" is to identify and describe those records created by both civil and military agencies and organizations that obviously include, or are likely to contain, documents concerning the States located beyond the Mississippi River. The records are described in varying levels of detail, ranging from general summaries of content to lists of individual file titles, an approach that actually combines aspects of Jameson's first and second stages of description. The 15 chapters of the guide presented here are fairly representative of the 100 or so chapters that will constitute the bulk of the complete guide. These chapters, forming the third of several parts based on executive departments or subject areas that will be issued as discrete publications, cover records documenting the activities of the Secretary of Agriculture and his predecessors and the component bureaus and administrative units of the Department of Agriculture that are relevant to the trans-Mississippi West through 1912.

The National Archives and Records Administration (NARA) endeavors to keep records in the order in which they were maintained by the creating agency, in the belief that this best preserves their integrity and interrelationships. The agency filing systems, however, were designed for administrative purposes and not for the benefit of future researchers. A major reason for the preparation of guides such as this is to assist subject-oriented researchers in understanding the complexities of recordkeeping systems and in locating material of interest among the vast quantities of records irrelevant to their needs.

The arrangement of the guide is by record group, the basic organizational unit to which all records in the National Archives are assigned. Most commonly, a record group consists of the records of a single bureau and its predecessors; all but one of the record groups discussed in this guide fall into this category, a specific example being Record Group 17, Records of the Bureau of Animal Industry. The exception is Record Group 16, Records of the Office of the Secretary of Agriculture, which exemplifies a general record group composed of the records of the head of an executive department and administrative units with department-wide responsibility.

In his annual report of November 27, 1912, James Wilson, who had served as Secretary of Agriculture since March 6, 1897, reflected on the accomplishments of the Department of Agriculture during his tenure, noting, "Its teachings, its discoveries, and its improvements are permeating the national agricultural life" (p. 259). The growth of the Department since its establishment in 1863 was clearly evident in statistics presented in 1912 by the Appointment Clerk in his annual report to the Secretary. The number of permanent employees had increased from 29 in 1863 to 13,858 as of July 1, 1912. Of the latter number, 2,815 worked in Washington, DC, and 11,043 elsewhere; 1,475 of the employees were women, 843 of whom worked in Washington, DC, and 632 elsewhere. Every State in the Union, as well as Alaska, Hawaii, and Puerto Rico, was represented in the Department's work force.

The Appointment Clerk, in his report, identified the following components of the Department: the Office of the Secretary; the Forest Service; the Bureaus of Animal Industry, Biological Survey, Chemistry, Entomology, Plant Industry, Soils, Statistics, and Weather; the Office of Experiment Stations and the Office of Public Roads; the Division of Publications and the Division of Accounts and Disbursement; the Library; and the Insecticide Board. The relative simplicity of the Department's organization in 1912, however, does not hint at its complicated organizational history overall. In response to dictates from Congress and demands from the public, bureaus and programs were created, expanded, or abolished, and functions and responsibilities were consolidated, divided, or transferred from one agency to another. As a result, information about a given program can be found in several record groups. This accounts for the fact that record groups for the Agricultural Marketing Service (RG 136), the Agricultural Research Service (RG 310) and the Animal and Plant Health Inspection Service (RG 463), agencies that

were established in 1972, 1953, and 1977, respectively, include small quantities of pre-1913 materials relating to programs they inherited from predecessor agencies. Because the quantity is relatively small, the relevant materials are described with related records in other record groups as shown in the Table of Contents. To assist researchers in tracing the dynamics of the Department's evolution, each chapter includes a brief administrative history of the agency or agencies covered by the designated record group. Those researchers seeking a brief overview of the department's organizational growth should consult the introduction to Record Group 16, Records of the Office of the Secretary of Agriculture.

Each chapter in this guide incorporates data gleaned from pertinent descriptive materials previously produced by the National Archives, usually a preliminary inventory of one kind or another. While this guide relies heavily on inventories for content, it also incorporates information taken from introductions to relevant National Archives microfilm publications and entries in preliminary checklists, special lists, and subject guides, as well as materials produced by the governmental units that created the records. All of the publications used in compiling these chapters are cited at appropriate places in the text. One constant source, an important resource not cited in the individual chapters, is the *Guide to the Holdings of the Still Picture Branch of the National Archives*, compiled by Barbara Lewis Burger and published in 1990. Nearly all the discussions of photographic records in this volume are based to a large degree on entries in that guide. Another source not cited elsewhere is the *Guide to Federal Records in the National Archives of the United States* (1995).

Within record groups, the basic archival unit of control for records is the series, which is a body of records arranged in some serial order or logically grouped together for some other reason. As noted above, NARA has prepared for many record groups inventories that describe the records series by series. Common to all types of inventories is the series entry, which includes the series title, covering dates, quantity, types of records, and perhaps some indication of content. Although most of the records discussed in this guide are also described in inventories, an attempt has been made here to present a different viewpoint, with more emphasis on subject matter, specific examples, and practical guidance on using the records. The discussion of basic records is expanded, and less significant records are treated more summarily.

In this guide, series titles and the dates of the records constituting the series appear in boldface type. Information about the volume of the records appears in parentheses following the dates. Volume is usually given in linear feet or inches, but in some instances, usually involving cartographic or photographic records, the number of items or images is given. Photographic records are usually identified by alphabetic collection designators instead of by series titles, with the designators shown in parentheses. For ease of indexing and ready reference, the paragraphs are numbered, i.e. 16.39, with 16 being the record group number and 39 the paragraph number, and in some instances sub-paragraph numbers are used. All such numbers are in boldface type. Tables, with titles cross-referenced to explanatory paragraphs in the text, provide either specific information on the content of a particular series or general information designed to facilitate use of the records. References in the text to Native Americans and other minorities reflect terms used in the records being discussed.

Many series of records having high research value have been microfilmed by the National Archives and Records Administration, and the numbers of the pertinent microfilm publications are given in the text. Most of the microfilm publication numbers begin with the letter "M" (M440), but some begin with "T" (T907). The majority of the "M" publications are accompanied by descriptive pamphlets that contain thorough explanations of the origin, content, and arrangement of the records; the "T" publications merely reproduce documents without the benefit of explanatory introductions or notes. All of the microfilm publications cited in the text are listed in Appendix A.

The National Archives of the United States, the permanently valuable records of the Federal Government, are housed in the National Archives facilities located in the Washington, DC, metropolitan area, and in 13 regional archives, whose addresses are given in Appendix B. For the most part, the

records described in this guide are held in the National Archives at College Park, MD, but some are in the custody of regional archives. These exceptions are noted in the text. Copies of many of the microfilm publications cited are available for use in the regional archives (see Appendix A for specific titles). Additional information concerning the distribution of reference copies of microfilm publications is provided by Special List 45, *National Archives Microfilm Publications in the Regional Archives System*, compiled by Teresa F. Matchette and issued in 1990.

Many members of the NARA staff have helped with this publication. Formal and informal finding aids are the foundation of the guide, and the staff members who prepared them are identified in appropriate places in the text. A number of staff members read and commented on the entries in this volume, while others helped in locating a few of the more obscure series; special thanks are extended to David Brown, Patrice C. Brown, Barbara L. Burger, Dale Connelly, John A. Dwyer, Michael Goldman, Elizabeth L. Hill, Lawrence H. McDonald, Teresa F. Matchette, Mary Frances Morrow, James S. Rush, Joseph D. Schwarz, Edward D. Smith, Aloha South, Ronald E. Swerczek, and Jarritus B. Wolfinger. I am especially grateful to Marjorie Heins Ciarlante for her assistance with the Weather Bureau chapter. Thanks are also due to staff members in the regional archives, particularly Peter W. Bunce; Alan Perry; Meg Hacker; Eileen N. Bolger and Susan Chambers; Suzanne J. Dewberry; Lisa Miller; Joyce E. Justice and Susan H. Karren; and Bruce Parham. I also wish to express my heartfelt thanks to Mary Donelan Kvasnicka, whose computer expertise helped recapture, with a minimum of effort, a rather lengthy chapter that had fallen victim to an electronic glitch.

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Robert M. Kvasnicka

# Record Group 7

## RECORDS OF THE BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

*The importance of the study of economic entomology becomes every year more and more apparent. Scarcely an agricultural or horticultural meeting takes place but that the subject of injurious insects and the best means of counteracting their ravages occupy a large share of attention. The losses occasioned by destructive insects to the farmers of the country aggregate an enormous sum, and there are few directions in which the Department can do more good than in researches having for their object the prevention of a portion of these immense losses. The valuable results already obtained in the work of the Entomological Division under its present efficient management are a sufficient promise of good work yet to be done.*

*Norman J. Colman,* Report of the Commissioner of Agriculture, 1885, *p. 12.*

### INTRODUCTION

**7.1** The Bureau of Entomology and Plant Quarantine was established in the Department of Agriculture on July 1, 1934, by authority of the Agricultural Appropriation Act approved March 26, 1934. Its establishment consolidated in one organization the principal entomological research and plant quarantine and control work formerly conducted by various agencies of the Department of Agriculture, especially the Bureau of Entomology and the Bureau of Plant Quarantine and their predecessors. Also placed under the supervision of the newly created Bureau were certain investigations carried out by the Division of Plant Disease Control of the Bureau of Plant Industry and the chemical work on insecticides and fungicides that had been performed by the Bureau of Chemistry and Soils.

**7.2** The entomological work of the Department of Agriculture originated in the Office of the Entomologist, which was established in the Agricultural Section of the Patent Office in 1854 to carry out studies pertaining to the characteristics and control of various insects injurious to vegetation. The results of some of these studies were published in annual reports of the Patent Office, which in 1849 had been placed under the jurisdiction of the newly established Department of the Interior. When the Department of Agriculture was established in 1862, the functions and records of the Agricultural Division of the Patent Office were transferred to the new Department. An entomological division was set up by the Commissioner of Agriculture in 1863, although no specific legislation provided for such a division until 1878.

**7.3** The Division of Entomology was designated the Bureau of Entomology in 1904. As a Bureau, it continued and expanded most of the investigations it had carried out as a Division and inaugurated additional research activities. The Bureau's first important regulatory work began in 1905, when in cooperation with the Post Office Department, it was entrusted with the enforcement of the Insect Pest Act, which prohibited the importation and interstate transportation of insects injurious to cultivated crops except for scientific purposes under definite regulations. Other factors contributing to the Bureau's expansion and new work in the early years were the increase of noxious insects, such as the cotton boll weevil in the South and the alfalfa weevil in the West, and the discovery that insects carry and transmit certain diseases of humans and animals. In his annual report for 1912 the Chief of the Bureau reported on work in 14 different subject areas, much of which involved States west of the Mississippi River.

**7.4** The 1912 annual report discussed experiments and investigations being conducted on cotton boll weevils, sugar cane borers, and rice insects in Louisiana; on alfalfa weevils in Utah; on pear thrips, bean thrips, orange thrips, grape Phylloxerae, hop aphides, red spiders, cutworms, and white ants in California; on grasshoppers, beet army worms, and fruit-tree leaf-rollers in Colorado; on codling moths in New Mexico; and on whitegrubs in Kansas and South Dakota.

**7.5** Dendroctonus beetles posed such a threat to forests that nine forest insect field stations were established to demonstrate the recommended methods of preventing or controlling damage to living pine,

spruce, Douglas fir, and larch trees. Station No. 1 was located at Columbia Falls, MT, and covered an area including the States of Montana, North Dakota, South Dakota, Nebraska, Kansas, and Colorado, and parts of Wyoming, Idaho, and Washington. The principal demonstration project was located on the Tongue River Indian Reservation, where the Black Hills beetle had killed an estimated 3,000,000 board feet of timber. Another station at Swan Lake, MT, covered private, State, and national forest timber infested with the mountain pine beetle. Station No. 5, located at Yreka, CA, covered an area including California, Arizona, New Mexico, and a small section of western Nevada; and Station No. 6, located at Klamath Falls, OR, covered Oregon, Utah, and parts of Nevada, Washington, Idaho, and Wyoming. Texas and Louisiana were among the States covered by Station No. 7, located in Spartanburg, SC.

**7.6** The Plant Quarantine Act of 1912 established Federal control over the importation and interstate transportation of plants and plant products and led to the creation of the Federal Horticultural Board. In addition to its other duties, the Board was given the authority to administer the Insect Pest Act of 1905, a function of the Bureau of Entomology. Thereafter, the Bureau dealt mainly with research, performing regulatory functions only as an agent of the Board; the Board and its successors handled regulatory matters.

**7.7** The Bureau of Plant Quarantine, which was not established as such until 1932, had its beginnings in the work done by the Federal Horticultural Board. The Board was empowered to regulate the importation of plants and plant products in order to exclude new and dangerous plant pests, control the interstate transportation of plants and plant products so that the spread of new plant pests might be prevented, and promulgate and enforce quarantine measures to prevent the introduction and spread of insect pests and plant diseases. The Board was composed of two representatives from the Bureau of Entomology, two from the Bureau of Plant Industry, and one from the Forest Service; all members were appointed by the Secretary of Agriculture.

**7.8** On July 1, 1928, the Board was replaced by the Plant Quarantine and Control Administration, and the plant quarantine and control activities of the Bureau of Entomology and the Bureau of Plant Industry were transferred to the Administration. This reorganization was designed to consolidate into one unit all of the plant quarantine and control work of the Department of Agriculture and to enable the Bureau of Entomology and the Bureau of Plant Industry to concentrate on research activities with freedom from regulatory duties. In 1932, the Plant Quarantine and Control Administration was designated the Bureau of Plant Quarantine. Two years later, the Bureau of Plant Quarantine was consolidated with the Bureau of Entomology to form the Bureau of Entomology and Plant Quarantine.

**7.9** The work of both the Bureau of Entomology and the Bureau of Plant Quarantine was carried on in a central office in Washington, DC, and in the field, much of it in cooperation with other bureaus of the Federal Government, State and local government agencies, and private organizations and individuals. The records discussed in this chapter consist of the central office records of the Bureau of Entomology and its predecessors and the Bureau of Plant Quarantine and its predecessors, primarily those of the Federal Horticultural Board.

**7.10** Record copies of the publications of the Division of Entomology, the Bureau of Entomology, and the Federal Horticultural Board are part of Record Group 287, Publications of the U.S. Government. Records relating to entomological work can also be found in Record Group 48, Records of the Office of the Secretary of the Interior, in Record Group 16, Records of the Office of the Secretary of Agriculture, and in Record Group 463, Records of the Animal and Plant Health Inspection Service.

**7.11** The records of the Agricultural Division of the Patent Office were transferred to the Department of Agriculture, but related records in the Office of the Secretary of the Interior were not. Consequently, letters sent relating to the Agricultural Division, which are bound with other letters sent concerning Patent Office business, and a small quantity of letters received relating to the Agricultural Division are among the records of the Patents and Miscellaneous Division in Record Group 48, Records of the Office of the Secretary of the Interior. The records of the Agricultural Division also include letters received, 1877-80, relating to the U.S. Entomological Commission, which was originally attached to the U.S. Geological and Geographical Survey of the Territories, directed by Ferdinand V. Hayden. The Commission studied the Rocky Mountain locust, and after the Survey was completed, continued to work under the direct supervision of the Secretary of the Interior. In 1881 the work of the Commission was transferred to the Department of Agriculture.

**7.12** Nearly 20 years earlier, in 1862, the Patent Office had transferred to the new Department of Agriculture the bound letters and reports of the Agricultural Division that constitute the records of the Agricultural Division of the Patent Office in Record Group 16, Records of the Office of the Secretary of Agriculture. These volumes include some documents concerning the work of Townend Glover, the first entomologist employed by the Federal Government. Record Group 16 also contains correspondence pertaining to the Secretary of Agriculture's general supervision and coordination of the Department's entomological research and plant quarantine activities. Included are copies of letters prepared for the signature of the Secretary by the Bureau of Entomology, 1906-29, and the Federal Horticultural Board, 1912-28. These letters are reproduced as part of National Archives Microfilm Publication M440, *Letters Sent by the Secretary of Agriculture, 1893-1929* (rolls 274-277 and 286-291, respectively).

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**Related Records in Record Group 463**
**Records of the Animal and**
**Plant Health Inspection Service**

**7.13** Only one series in Record Group 463 contains pre-1913 material, and for that reason the records are discussed here rather than in a separate chapter. Available only on 16mm microfilm (313 rolls), **records relating to insect surveys, 1868-1970** (10 ft.), are arranged by filming job and thereunder by scientific name of insect. According to the documents covering their accession by the National Archives, the records constituting each filming job are arranged by genus, species, or subspecies and thereunder by one of three subcategories: general, State, or foreign country. Within each subcategory, the records are arranged chronologically by date of pest activity. Because of the manner in which the records were filmed, researchers interested in a particular species of insects would have to consult numerous rolls of microfilm to locate all of the pertinent information. Box lists are available.

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**7.14** Most of the textual records found in Record Group 7 have been described in either the *Preliminary Inventory of the Records of the Bureau of Entomology and Plant Quarantine* (PI 94), compiled by Harold T. Pinkett and published in 1956, or in the title-line supplement (NC-136), compiled by William F. Sherman and issued in November 1965. The few relevant records accessioned since 1965 that relate to the pre-1913 period are described below.

**7.15 Editorial Note:** Many of the records included in Record Group 7 originated after 1912, and they are not described here. Some field records in this category are held by the National Archives--Southwest Region, in Fort Worth, TX, and the National Archives--Pacific Sierra Region, in San Bruno, CA. This record group also includes a motion picture, a sound recording, and a considerable collection of cartographic records, all created after 1913. Unless otherwise noted, series consisting of records that originated prior to 1913 but extending beyond that date are described in their entirety; no attempt has been made to determine what part of such series relates to the pre-1913 period. Most photographic records are maintained apart from the texual records and are identified by alphabetic collection designators instead of by series titles; the designators are shown in parentheses.

## RECORDS OF THE BUREAU OF ENTOMOLOGY

**7.16** The administrative and scientific work of the Bureau was under the general direction and supervision of the "Entomologist and Chief of Bureau," who was assisted by an associate chief and an assistant chief. Organizational divisions were usually designated according to the insects or groups of insects dealt with or according to special phases of entomological research. Records of the relevant divisions are described below, following a description of the pertinent general records of the Bureau.

### General Records

**7.17** The general records of the Bureau of Entomology consist of records of the Office of the Chief and other units sharing in or facilitating the overall administration of the Bureau and its predecessor, the Division of Entomology, and records of special activities not connected with the work of particular organizational units. As will be noted, the year 1908 marked the end or beginning of several important series of the Bureau's records.

**7.18** Bound **letters received, 1878-83** (11 vols., 3 ft.), deal mainly with requests for information concerning the identification of injurious crop insects and methods of eradicating or controlling these insects and for assistance in apicultural and sericultural enterprises. The letters are arranged chronologically, and each volume is indexed by name of correspondent. Unbound **letters received, 1883-1908** (51 ft.), arranged alphabetically by name of correspondent, cover the same topics as the bound letters and show the increasing tendency of farmers and State and foreign entomologists to seek Federal assistance in efforts to combat the ravages of familiar and new insects. These letters provide extensive documentation of the injurious effects of such insects as the cotton boll weevil, the Hessian fly, and the Rocky Mountain locust. Interest in these matters is also evident in the **letters received requesting publications, 1883-91** (1 ft.), dealing with injurious crop insects, methods of eradicating or controlling insect pests, and assistance in agricultural enterprises. Copies of replies to the incoming letters are found in the bound and unbound series of letters sent described below.

**7.19** Press copies of **letters sent, 1878-93** (80 vols., 9 ft.), relate to all phases of the work of the Division of Entomology. The volumes, indexed by name of correspondent and arranged chronologically, show the great amount of attention given by the Division to the dissemination of information concerning destructive insects and the Division's early efforts to encourage apiculture and sericulture. The inauguration and growth of investigations of the cotton boll weevil and the gypsy and brown-tail moths are subjects covered by many of the unbound press copies of **letters sent, 1896-1908** (38 ft.). At one time these letters were bound, but before they were transferred to the National Archives they were removed from their bindings and separated into two groups. Apparently one group was considered to contain less important letters that were intended to be destroyed. The subject matter of the two groups probably appeared to be so similar or interrelated, however, that the Bureau of Entomology decided to keep both groups. The letters are now arranged alphabetically but generally only by the first letter of the correspondent's surname. Access to the letters is somewhat facilitated by a name **index to letters sent, 1878-1908** (41 ft.) recorded on 2- by 5-inch cards. The index is in two parts, one for the period about 1878 to 1894 and the other for the period 1894 to 1908. The cards show the name and address of the correspondent, and the volume and page numbers of the pertinent letters. The usefulness of the part of the index covering the unbound letters is lessened considerably since the volume and page number references are now of limited value.

**7.20** The Bureau maintained three general correspondence files. Letters withdrawn from both the letters received and the letters sent relating to various activities of the Division of Entomology make up a series identified as **correspondence, 1894-97** (20 ft.). Arranged alphabetically by name of correspondent, this series includes a considerable number of letters exchanged between Division staff and State and foreign entomologists. After 1908 most of the Bureau's correspondence was placed in two large correspondence files covering the periods 1908-24 and 1925-34. The pertinent file, **general correspondence, 1908-24** (175 ft.), relates to all phases of the Bureau's work. Much of it concerns the inauguration and development of plant quarantine and control work by the Federal Government; the development of new methods in the fight against the cotton boll weevil and the pink bollworm; the expansion of the Bureau's work in agriculture; new investigations of forest, fruit, cereal, and forage insects; special studies of insects affecting man and animals; and the first efforts to control the Japanese beetle.

**7.21** Over the years the Bureau maintained many small collections of records reflecting particular functions or special interests. Supervision of the scientific activities of the Division of Entomology was one of the functions of the Assistant Secretary of Agriculture, whose efforts in this regard are reflected in the **letters referred by the Assistant Secretary, 1892-94** (1 ft.). This series consists of letters received by the Secretary of Agriculture and the Assistant Secretary that the Assistant Secretary referred to the Chief of the Division of Entomology for reply. Also included are copies of replies sent over the signature of the Assistant Secretary. The letters, which are arranged alphabetically by name of correspondent, deal mainly with requests for entomological publications and information concerning insects injurious to crops and silk culture.

**7.22** Insect investigations in various regions of the United States are the subject of **letters and reports received from field agents, 1881-1907** (3 ft.). These records are arranged alphabetically by name of field agent, as are **lists of insect specimens received from or sent to field agents, 1890-1905** (9 in.).

Administrative matters connected with investigations of Southern field-crop insects are the concern of the **letters received from W.D. Hunter, 1902-8** (2 ft.), which are arranged chronologically. Walter D. Hunter served first as a special field agent and later as head of the Division of Southern Field-Crop Insect Investigations, headquartered in Dallas, TX (7.33-7.37). The letters pertain chiefly to Hunter's research activities in Texas and document his contacts and cooperation with State agencies, colleges, and other institutions engaged in similar efforts to control the boll weevil. Occasional replies to Hunter's letters are included. These records have been published as National Archives Microfilm Publication M864 (3 rolls). Copies of the Bureau's replies to Hunter's letters are among the unbound letters sent (7.19).

**7.23** During the 1870's the Division of Entomology became interested in encouraging and developing a silk industry in the United States. Interest in the possibilities of silk culture was high in the Eastern States and in Kansas and Louisiana. The work of the Division is reflected in **letters received relating to silk culture, 1883** (1 vol., 2 in.), pertaining primarily to requests for information concerning methods of producing silk and for silkworm eggs and seeds and cuttings of silkworm food plants. The letters, which are bound in chronological order and indexed by name of correspondent, also contain information pertaining to results of experiments in silk culture. Work in this area was abandoned temporarily during the 1880's but was revived in 1902 and continued until 1908. The **letters received relating to silk culture, 1901-4** (3 ft.), arranged alphabetically by name of correspondent, describe the renewed efforts to develop an indigenous silk industry. Replies to these letters are found in press copies of **letters sent relating to silk culture, 1902-4** (7 vols., 1 ft.), dealing with requests for publications on silk culture and with the purchase and distribution of silkworm eggs and food plants. The letters also show the difficulties encountered in the attempts to establish a silk industry in the United States. The volumes of letters sent are indexed by name of correspondent; the letters are arranged chronologically.

**7.24** In the 1890's the Division of Entomology began studying problems caused by insects that entered the United States with goods imported from foreign countries. One of the most destructive pests was the San Jose scale, an insect that attacked deciduous fruit trees. Its threat was greatest to orchards in the Eastern States, but trees in Oregon were also endangered. One of the means of combating the pest was the Asiatic ladybird (Chilocorus similis), a parasite that the Division imported from China, the original home of the scale. **Letters received relating to the Asiatic ladybird, 1902-4** (3 in.), relate mainly to experimental breeding and distribution of the beetles to areas afflicted with the San Jose scale. The letters are arranged alphabetically by name of correspondent. Although replies to these letters are among the letters sent (7.19), related materials are among the **records relating to the San Jose scale, 1897-1900** (6 in.). This series includes not only letters received from State agricultural officials and farmers describing the effect of the San Jose scale on plants and fruits in their States but also copies of statutes, diplomatic despatches, and newspaper clippings pertaining to the importation of American plants and fruits into foreign countries. The records are arranged alphabetically by name of country or State.

**7.25** Mosquitoes and grasshoppers are other insects that generated enough correspondence to warrant the establishment of separate series of incoming letters. **Letters received relating to mosquito investigations, 1900-1901** (3 in.), are mainly requests for identification of mosquito specimens and for publications on mosquitoes. Many of the letters contain information about the prevalence and injurious effects of these insects in different localities. **Letters received relating to grasshopper fungus, 1901-2** (1 ft.), pertain mainly to requests for cultures of grasshopper fungus and reports on results obtained by the use of the cultures in combating the menace of grasshoppers. Both collections of letters are arranged alphabetically by name of correspondent, and the replies to both series are among the letters sent (7.19).

**7.26** In 1904 the Bureau mounted an elaborate exhibit for display at the Louisiana Purchase Exposition held in St. Louis, MO. **Letters received relating to the Louisiana Purchase Exposition of 1904, 1903-4** (3 in.), arranged alphabetically by name of correspondent, deal chiefly with requests for information concerning entomological exhibits for this exposition and the shipment of exhibit materials. Press copies of the **letters sent relating to the Louisiana Purchase Exposition of 1904, 1903-4** (1 vol., 1 in.), are arranged chronologically. Additional records relating to the Exposition are found in Record Group 43, Records of International Conferences, Commissions, and Expositions. The relevant records are discussed in *The Trans-Mississippi West, 1804-1912:*

*Part I, A Guide to Records of the Department of State for the Territorial Period* (1993).

**7.27** Two series of administrative records provide information about employees of the Division and the Bureau. The **letters received relating to applicants for positions, 1885-1908** (6 in.), which are arranged alphabetically by name of applicant, describe traits and early experiences of some persons who later made important contributions American entomology. Press copies of **letters sent relating to personnel, 1891-1906** (2 vols., 2 in.), also arranged chronologically, concern appointments, promotions, authorizations, special assignments, and other personnel matters.

**7.28** Miscellaneous records include **newspaper and magazine clippings relating to insects, ca. 1885-1905** (3 in.), arranged by name of insect, pertaining to insects injurious to corn, cotton, tobacco, and other crops and to efforts of the Department of Agriculture to control the insects; **notes of D.W. Coquillet, 1887-93** (5 vols., 4 in.), arranged numerically by specimen number, relating to the history and description of insect specimens collected at or near Los Angeles, CA, by Field Agent Daniel W. Coquillet; and chronologically arranged **records relating to the National Conservation Commission, 1908** (1 in.), consisting mainly of questionnaires and letters pertaining to information to be furnished the Commission on losses of natural resources caused by insects. **Notes of the Division of Entomology, 1863-1903** (22 vols., 3 ft.), pertain to the history and description of specimens of larvae, pupae, and insects collected by Charles V. Riley, Chief of the Division, and other officials of the Division of Entomology and by private individuals. Included are notes concerning entomological specimens, written by Mr. Riley before he entered Federal service, when he was a farmer in Illinois and later the State Entomologist of Missouri. The notes are recorded in two groups of volumes, one for the period 1863-79 and the other for the period 1879-1903, and are arranged numerically by specimen number.

**7.29** Rounding out the general records is a series identified as **office files of the Chief of the Bureau of Entomology, 1880-1950** (10 ft.). These records consist chiefly of correspondence, newspaper clippings, and copies of laws relating to programs that were administered by the officials who were in charge of the entomological work of the Department of Agriculture. These materials are arranged by type of record and thereunder chronologically.

## Divisional Records

### Division of Cereal and Forage Insects

**7.30** This Division conducted investigations to develop effective and economical methods of controlling insects that damage cereal and forage crops, including sugarcane. The work included not only studies of insects but also experimentation in cultural practices, use of machinery, and importation of natural enemies of cereal and forage insects.

**7.31** **Notes relating to field investigations, 1903-34** (143 ft.), conducted at some 40 field laboratories throughout the United States, pertain to the appearance, distribution, physiology, and habits of insects affecting cereal and forage crops. The notes, which are on 5- by 8-inch cards arranged alphabetically by order and thereunder by genus, species, and locality, were compiled from field and laboratory data submitted by approximately 275 research workers. The work was directed by Francis M. Webster during the period 1904-16. Information on the cards serves to connect field collections and laboratory "rearing notes" with insect specimens preserved in collections of the museums collaborating with the Division. Undated **notes relating to coleopterous insects** (3 ft.), which were compiled on 5- by 8-inch cards and arranged alphabetically by type of coleopterous insect, contain information on field investigations and published studies pertaining to the distribution and habits of beetles.

**7.32** Investigations of the chinch bug, Hessian fly, and certain other insect enemies of cereal and forage crops are the subject of **correspondence with E.O.G. Kelly, 1907-17** (2 ft.). Edward O.G. Kelly was a Bureau entomologist stationed at Wellington, KS. **Records relating to insect studies at the entomological laboratory, Wellington, KS, 1907-17** (6 vols., 6 in.), consist mainly of registers of insect specimens used in studies conducted at the field laboratory in Wellington. The registers show the names of the insects and the dates and places they were collected. The series also includes a book of formulas used in the laboratory's studies. Also available is a **bibliography of publications relating to rice insects, 1855-1925** (1 ft.), compiled on 4- by 6-inch cards arranged alphabetically in two segments, by name of species and by name of author. The publications that are cited pertain to the distribution, habits, physiology, natural enemies, and control of rice insects.

Division of Southern Field-Crop Insect Investigations

**7.33** The purpose of this Division was to eradicate or control insects injurious to cotton, tobacco, sugarcane, and rice or, failing that, to develop methods to permit the cultivation of these crops in the presence of injurious insects. After 1925 the study of insects affecting cotton crops was assigned to the newly formed Division of Cotton Insect Investigations (7.38).

**7.34 Letters and reports received from C.H.T. Townsend, 1894-98** (3 in.), arranged chronologically, deal mainly with the investigations of the Mexican cotton boll weevil by C.H. Tyler Townsend, a field agent of the Division of Entomology, showing the habits and distribution of the weevil and the damage done by the pest. A considerable amount of information about other early investigations of the Mexican cotton boll weevil, particularly the development of control and cultural methods and the propagation of parasitic enemies of the weevil, is contained in the **general correspondence, 1901-24** (19 ft.). Arranged alphabetically by name of correspondent, the correspondence covers all phases of the work of the Division of Southern Field-Crop Insect Investigations and its predecessor units. Investigative work is documented by an **"Accession Book," 1904** (1 vol., 1 in.), recording the collection of insect specimens from various locations in Texas. Entries, arranged by specimen number, give the name of the species and the collector, the locality where the insect was found, the date of collection, and the type of plant infested.

**7.35** Grain dealers submitted **notices and certificates relating to grain shipments, 1904** (3 in.), to W.D. Hunter, head of the Division of Southern Field-Crop Insect Investigations, to show that the Department of Agriculture had authorized the shipment of grain from regions of Texas free of the cotton boll weevil into Louisiana and Georgia. These notices and certificates, which are arranged chronologically, were required under quarantine laws of Louisiana and Georgia, which the Department helped to enforce.

**7.36** The other relevant records from this Division concern the cotton boll weevil. **Newspaper clippings relating to the cotton boll weevil, 1901-12** (8 ft.), are arranged chronologically and deal with the distribution of the pest, its habits, and the damage it inflicted; efforts to develop control and new cultural methods; and the introduction of parasitic enemies. Correspondence and catalogs and drawings of cotton-gin machinery make up the **records relating to a study of cotton gins, 1904** (3 in.), arranged alphabetically by name of correspondent. The study was conducted to determine the effect of cotton gins on the dissemination of the cotton boll weevil. **Correspondence relating to cotton boll weevil quarantines, 1904-5** (1 ft.), pertains mainly to the cooperation of the Bureau with Louisiana and other cotton-growing States in the enforcement of quarantine regulations against commodities from areas infested by boll weevils. This correspondence is arranged by year and thereunder alphabetically by name of correspondent.

**7.37** Also arranged alphabetically by name of correspondent is **correspondence relating to experimental work, 1904-5** (6 in.), which deals with the Bureau's establishment and operation of experimental farms in Texas for the purpose of testing methods of controlling the cotton boll weevil under different climatic and soil conditions. **Specifications for cotton experiments, 1905** (3 in.), contain information concerning the owner, location, and size of experimental plots; the variety of cotton seed to be planted; the time of planting; the method of cultivation; fertilizers to be used; the method of picking; and records to be kept on the experiment. The plots were located mainly in localities in Texas and Louisiana that were infested by boll weevils. The specifications are arranged chronologically.

Division of Cotton Insect Investigations

**7.38 General correspondence, 1900-49** (5 ft.), includes letters received from and copies of letters sent to private persons, representatives of companies, and State officials. The records are arranged in two chronological segments, 1900-36 and 1937-49, with the documents within each segment arranged alphabetically by name of correspondent or by general subject. A series of **special correspondence files, 1904-6, 1913-31** (2 ft.), includes some correspondence with Leland O. Howard, head of the Division of Entomology, 1894-1904, and the Bureau of Entomology, 1904-1927.

Division of Fruit Insect Investigations

**7.39** This Division conducted studies on insects injurious to deciduous fruits, vineyards, and nuts, including pear thrips, woolly apple aphis, grape Phylloxera, and the codling moth. **General administra-**

**tive files, 1901-48** (13 ft.), consist chiefly of reports and correspondence concerning such subjects as insecticides, removal of spray residue from fruit, activities of Department of Agriculture committees, and work programs. Included are a few memorandums and bibliographies at the end of the series. The records are arranged alphabetically by subject or name of insect.

**7.40** Activities of the Bureau's field installations are documented by several series. **Reports and correspondence concerning research conducted by field stations in the United States, 1907-51** (44 ft.), are arranged by name of State and thereunder by location of field station. Western States represented by relatively substantial amounts of material are Arkansas, California, Idaho, Kansas, Louisiana, Missouri, Oregon, Texas, and Washington. The records consist of processed copies of annual, quarterly, and other reports issued at regular intervals; copies of letters addressed to private persons, dealing for the most part with technical problems of insect control; and some memorandums concerning manuscripts submitted to the Division for publication. **Miscellaneous correspondence with heads of field stations, 1912-41** (2 ft.), concerns research, administrative matters, and personnel matters. These records are arranged alphabetically by surname of the head of the field unit, but the files for the letters "A" through "L" are missing. Finally, **reports from field stations on weather conditions, 1905-30** (2 ft.), relate chiefly to temperatures and precipitation, although the type of data furnished varies somewhat because the report forms were not uniform in format. The reports are arranged by State and thereunder chronologically.

### Division of Taxonomic Investigations

**7.41** Taxonomic work (the identification and classification of insects) was begun by the Division of Entomology in 1897 and was given divisional status in the Bureau of Entomology during fiscal year 1926. The work of the Division, later the Division of Insect Identification, was concerned primarily with the identification, classification, and description of insects and occasionally with the conducting of studies in insect pathology and morphology. **General correspondence, 1887-1950** (4 ft.), relates to insect samples for identification, reports about the identification, or manuscripts submitted for comment and approval. The records are arranged alphabetically by name of correspondent and thereunder chronologically.

### Division of Tropical and Subtropical Fruit Insect Investigations

**7.42** This Division and its predecessor units carried on studies relating to insects affecting citrus fruits, pineapples, olives, figs, and other tropical and subtropical fruits. **Correspondence relating to investigations of the white fly, 1906-9** (6 in.), deals mainly with the work of Russell S. Woglum and Austin W. Morrill, field agents of the Bureau stationed at Los Angeles, CA, and Orlando, FL, respectively, in fighting the menace of the white fly to citrus fruits. The records are arranged by name of agent and thereunder chronologically. Information about other pests with similar appetites, such as thrips, is found in **correspondence and published materials concerning insects that damage citrus fruits, 1907-31** (2 ft.). These records are arranged by name of insect and thereunder by type of record.

### Photographic Records

**7.43** Eminent entomologists and natural scientists from 1700 to 1836 **(H)** are the subject of an extensive collection of photographic prints and photographic copies of drawings and portraits. Most of the material was accumulated by Leland O. Howard, Chief of the Division of Entomology and the Bureau of Entomology from 1894 to 1927, and the emphasis of the collection is on entomologists working for the Department of Agriculture. Other early photographic records include photographs of cotton insects and of a variety of cotton crop dusting practices, 1904-26 **(CI)**. An undated group of photographs shows the cultivation and marketing of cotton, corn, blueberries, oranges, and tobacco **(T)**.

## RECORDS OF THE BUREAU OF PLANT QUARANTINE

### The Federal Horticultural Board

**7.44** Representatives from the Bureau of Entomology, the Bureau of Plant Industry, and the Forest Service composed the Federal Horticultural Board, whose five members were appointed by the Secretary of Agriculture and served without additional compensation. A salaried secretary (later designated an administrative officer) directed the administrative operations necessary to carry out substantive functions.

Expansion of the Board's work led to frequent staff reorganizations, but in general the Board maintained a small administrative and investigative staff in Washington, DC, and used a large force of inspectors at ports of entry, at border stations, and in localities affected by plant quarantines. On July 1, 1928, the Board was replaced by the Plant Quarantine and Control Administration.

**7.45** The Board depended heavily upon other agencies, both Federal and State, to accomplish its goals. Some State officials connected with plant quarantine and control work were appointed collaborators of the Board to assist in the enforcement of quarantine and regulatory orders in their areas. The Board was assisted by the Bureau of Entomology in the plant quarantine and control activities necessitated by the Mediterranean fruit fly, melon fly, European corn borer, gypsy and brown-tail moths, Japanese and Asiatic beetles, and Mexican fruit worm; and by the Bureau of Plant Industry in the administration of quarantines on account of white-pine blister rust, phony peach disease, and black stem rust. The Board had the cooperation of the Bureau of Customs of the Treasury Department in handling plants and plant products arriving at ports of entry and obtained through the State Department the cooperation of foreign governments in the inspection of plant material offered for export to the United States. The Post Office Department cooperated in many phases of the Board's work directed against the importation and interstate movement of noxious insects.

General Records of the Board

**7.46** The general records of the Federal Horticultural Board consist of two series of records, minutes and general correspondence, that were either created or maintained by the Chairman, Secretary, and other officials of the Board who had general responsibility for the administration of the Board's activities. The **minutes, 1912-28** (5 vols., 1 ft.), of regular and special meetings and conferences held by the Board summarize discussions and decisions and provide much information concerning the history and administration of Federal plant quarantine measures. The volumes are indexed by subject; the minutes are arranged chronologically. Regular meetings of the board were held weekly, but special meetings and conferences were called from time to time to deal with special quarantine problems. The **general correspondence, 1912-28** (270 ft.), arranged alphabetically by name of correspondent, pertains to all activities of the Board, and contains a great deal of information concerning the determination of need for plant quarantine measures, the enforcement of domestic and foreign quarantine and other restrictive orders, the administration of special congressional appropriations for the control or extermination of newly established plant enemies, and the cooperation with other Federal agencies in plant quarantine work.

Branch Records of the Board

**7.47** The Branch of Domestic Plant Quarantines, which was established in 1927, represented the consolidation of certain units that had been concerned with various phases of regulatory work pertaining to the control of insect pests within the United States. The Branch supervised the enforcement of quarantines designed to prevent the further distribution within the United States of the pink bollworm, Thurberia weevil, white-pine blister rust, date-palm scale, and other crop pests. **Correspondence relating to the control of the pink bollworm and Thurberia weevil, 1912-28** (10 ft.), deals with the conduct of operations for the eradication or suppression of two important insects infesting cotton in the Southwestern United States. The records are arranged chronologically.

Other records

**7.48** A few series of records were begun by the Board and continued by its successor, the Plant Quarantine and Control Administration. Among them are **records relating to plant quarantines, Nos. 1 through 75, 1912-49** (6 ft.), which include notices and stenographic reports of hearings, notices of quarantines, and amendments to regulations supplemental to the notices. These records, arranged by quarantine number, document procedures used in the promulgation of plant quarantines and describe the circumstance that led to such action. The quarantines established in 1912 pertained to white-pine blister rust (No. 1); the Mediterranean fruit fly (No. 2); the potato wart (No. 3); and the gypsy and brown-tail moths (No. 4). This particular series of records was also maintained and added to by the Bureau of Plant Quarantine and the Bureau of Entomology and Plant Quarantine.

# Record Group 8

## RECORDS OF THE BUREAU OF AGRICULTURAL ENGINEERING

*Full realization of the possibilities of machinery in agriculture...[and] all such modifications of the physical aspects of farms as are necessary to promote economical and scientific management....is a problem in agricultural engineering. It is being studied, with related problems, by the Bureau of Agricultural Engineering. This bureau, authorized by the last Congress, began its existence on July 1, 1931. It is new, however, only in being a separate bureau. Agricultural engineering work in the department goes back to 1898, when Congress first appropriated money for "irrigation information." Provision was later made for the study of drainage problems.*

*Arthur M. Hyde, Secretary,* Report of the Secretary of Agriculture, *1931, p. 56.*

### INTRODUCTION

**8.1** On July 1, 1931, the Division of Agricultural Engineering, Bureau of Public Roads, became the Bureau of Agricultural Engineering in accordance with the Department of Agriculture's appropriation act for fiscal year 1932. When noting this event in his 1931 Annual Report, the Secretary of Agriculture stated that the new Bureau was responsible for agricultural engineering functions related to irrigation originally authorized in 1898. At that time, irrigation work had been performed by the Office of Experiment Stations, a direct predecessor of the new Bureau.

**8.2** The Office of Experiment Stations was actually the second administrative unit established within the Department of Agriculture to carry on research in agricultural engineering. The first had been the Office of Irrigation Inquiry, established in 1890 to collect irrigation data and to study artesian wells. (The Department had collected some irrigation data under a grant received in 1880, but the Office of Irrigation Inquiry was the first administrative unit formally responsible for such work.) Appropriations for the Office soon ceased, and it went out of existence in 1896; some of its records are filed with those of the Assistant Secretary of Agriculture (*see* 8.7). When the Office of Experiment Stations lost its irrigation- and drainage-related functions to the new Office of Public Roads and Rural Engineering in 1918, the relevant records were transferred to the new agency.

**8.3** The records discussed in this chapter were created by the Office of Experiment Stations and date back to 1898, when the Office received a grant to collect and publish data on irrigation. Subsequent legislation widened the scope of the irrigation investigations conducted by the Office; in 1903 the Office's Irrigation Investigations unit was also assigned drainage work, and irrigation and drainage problems continued to be handled by the same unit until 1907, when a separate Drainage Investigations unit was formed. The Office of Experiment Stations also started work on farm machinery and structures. This work was transferred to the Office of Farm Management of the Bureau of Plant Industry by 1908.

**8.4** The Department of Agriculture appropriation act for fiscal year 1916 consolidated the irrigation and drainage work of the Office of Experiment Stations, the farm architecture and machinery work of the Office of Farm Management, and the functions of the Office of Public Roads in a new agency called the Office of Public Roads and Rural Engineering (the Bureau of Public Roads after 1918). This reorganization brought most of the civil and mechanical engineering work of the Department into one office. Within that office, however, the Drainage, Irrigation, and Rural Engineering (that is, structures and machinery) Investigations continued as separate units until 1921, when they were brought together in a newly created Division of Agricultural Engineering.

**8.5** As noted above, the Division of Agricultural Engineering was made a separate bureau in 1931. However, the new bureau was destined for a relatively short existence. In 1935 its research in soil-erosion control was transferred to the newly established Soil Conservation Service. Three years later, the construction and hydrological work of its Divisions of Drainage and Irrigation was transferred to the same Service, and the other functions of these Divisions were given to the Bureau of Plant Industry. Shorn of these functions, the Bureau of Agricultural Engineering merged with the Bureau of Chemistry and Soils to form the new Bureau of Agricultural

Chemistry and Engineering. In 1943 the engineering functions were transferred to the Bureau of Plant Industry, Soils, and Agricultural Engineering.

**8.6** Federal agricultural engineering work has varied in nature. Irrigation investigations have been concerned with the utilization, flow, and measurement of water, irrigation appliances, and irrigation customs and laws. Drainage research has covered such topics as the construction, maintenance, and operation of drainage systems, water flow and run-off, soil erosion, drainage requirements of soils, machinery (especially pumps), and the organization and operation of drainage districts. Mechanical research, while dealing primarily with processing machinery, insect-control machinery, harvesting devices, tractors and other power sources, fertilizer distributors, and heating and drying equipment, has also included studies of the history and economic consequences of the use of agricultural machinery. Structural research has been concerned with the design of homes, barns, and storage facilities, methods of temperature control, water supply and disposal, and power installations.

**8.7** Because the Bureau of Agricultural Engineering was not created until 1931, this chapter is concerned with records the Bureau inherited from its predecessors, primarily records relating to irrigation and drainage investigations that were conducted by units of the Office of Experiment Stations. Cartographic records generated by the investigations are in Record Group 114, Records of the Soil Conservation Service. Information relating to the administration of the investigative functions can be found among the records of the Office of Experiment Stations in Record Group 164 and in Record Group 16, Records of the Office of the Secretary of Agriculture. The latter record group also contains some letters sent by the Office of Irrigation Inquiry. Record copies of the publications of both the Office of Irrigation Inquiry and the Office of Experiment Stations are part of Record Group 287, Publications of the U.S. Government. Of interest also are the records of the Division of Western Irrigation Agriculture in Record Group 54, Records of the Bureau of Plant Industry, Soils, and Agricultural Engineering. This Division studied dry and irrigated farming from the viewpoint of the botanist rather than the engineer.

**8.8** Related records originating in agencies outside the Department of Agriculture include those of the Bureau of Reclamation (Record Group 115) and of the Office of the Secretary of the Interior (Record Group 48). Some records concern the task of advising farmers who were setting up irrigation districts under the terms of the Carey and Newlands Acts about legal matters, ditch construction, and application of water to plants. Also related are records of the Committee on Irrigation and Reclamation of Arid Lands, 1891-1946, in Record Group 46, Records of the U.S. Senate, and records of the Committee on Irrigation of Arid Lands, 1893-1924, in Record Group 233, Records of the U.S. House of Representatives.

**8.9** The *Preliminary Inventory of the Records of the Bureau of Agricultural Engineering* (PI 53), Nathan Reingold, compiler, describes the records of the central office of the Bureau in considerable detail. Included is a description of field office records, 1905-15, relevant to this guide, that are now held by the National Archives--Southeast Region, East Point, GA, and the National Archives--Southwest Region, Fort Worth, TX. The records of the Berkeley, CA, field office, where the officials who directed the investigation units were headquartered, are described in an unpublished finding aid available at the National Archives--Pacific Sierra Region, San Bruno, CA, which has custody of the records.

**8.10 Editorial Note**: Most records in Record Group 8, including central office cartographic records, originated after 1912, and they are not discussed here. Unless otherwise noted, series consisting of records that originated prior to 1913 but extending beyond that date are described in their entirety; no attempt has been made to determine what part of such series relates to the pre-1913 period. The central office photographic records, which are fairly extensive (nearly 3,700 items), are maintained apart from the textual records. Although the bulk of these originated in 1913 or later, a relatively small number of negatives date from 1908, and they are described in 8.22. Photographic records are usually identified by alphabetic collection designators rather than by series titles; the designators are shown in parentheses.

## RECORDS OF THE OFFICE OF EXPERIMENT STATIONS

### Records of the Central Office

#### Correspondence Regarding Irrigation Investigations

**8.11** In 1898 the Office of Experiment Stations received an appropriation of $10,000 for the col-

lection and publication of data on irrigation and the employment of personnel to do the necessary work. In the following year the scope was broadened to include irrigation law, the actual utilization of water, and improvement of irrigation methods. The administrative unit carrying out these functions was called Irrigation Investigations, 1898-1904; Irrigation and Drainage Investigations, 1904-7; and Irrigation Investigations, 1907-15. It was also known informally as the Irrigation Division and as the Irrigation Investigations Division. Elwood Mead, the Territorial and State Engineer of Wyoming and later Commissioner of Reclamation, was named head of the unit. His headquarters was originally at Cheyenne, WY, but was moved to Berkeley, CA, in 1901. Although established with the needs of the West in mind, the irrigation work was soon extended to the East. From 1903 to 1907 irrigation and drainage investigations were both handled by one administrative unit, but separate records were maintained for each function.

**8.12** Correspondence forms the bulk of the files. **General correspondence, 1898-1902 and 1905-12** (13 ft.), relates to administrative matters, the nature and future policy of the irrigation and drainage investigations, and a wide variety of other topics concerning the development of irrigation in arid areas. Except for a small group of the earliest letters, which are arranged in chronological order, the letters are arranged in alphabetical order by name of correspondent within chronological periods.

**8.13 Staff correspondence, ca. 1906 and 1912-15** (8 ft.), is arranged in three segments: "Arid-area" projects, "Humid Sections" projects, and "Independent" projects. The first segment, consisting of letters exchanged between the Washington office and engineers working on arid-area projects in the field, deals with administrative details, general problems, local conditions, and technical problems. These letters are arranged alphabetically by State and chronologically thereunder. The segment on "Humid Sections" projects includes some correspondence with the public. The segment on "Independent" projects concerns projects that were not confined to specific localities. Each of these latter two segments is arranged alphabetically by name of correspondent or subject.

**8.14** When Elwood Mead, Chief of the Irrigation Division, traveled in the field, Ray P. Teele served as Acting Chief of the Division. The letters the two men exchanged during Mead's absences make up most of the **correspondence of R.P. Teele, 1904-9** (3 in.), and concern the attitude of the public, relations with Congress, and the railroads. The letters are arranged alphabetically by name of correspondent and chronologically thereunder.

**8.15 Field office correspondence, 1904-6** (6 in.), is arranged alphabetically by name of correspondent and covers administrative details, general policies, and technical work. The correspondence comes from the Cheyenne field office (Nov. 1, 1905-Feb. 26, 1906) and from Berkeley (Mar.-Apr. 1904, Jan.-Oct. 1905), where Elwood Mead was then located.

Correspondence and Other Records Relating to Drainage Investigations

**8.16** A Special Agent for Drainage was on the staff of the Office of Experiment Stations as early as 1902. By that time the unit for Irrigation Investigations was also concerned with the drainage of irrigated lands. In 1903 work relating to drainage of humid areas was formally merged with the Irrigation Investigations unit, and the name of the unit was changed to Irrigation and Drainage Investigations during the following year. Despite the administrative merger, records documenting the two functions were maintained separately. In 1907 the functions were separated and a new unit of Drainage Investigations was established. The major work of the new unit consisted of aiding in the establishment of drainage districts. In addition, work was begun on water flow, drain construction, and erosion control.

**8.17** Correspondence files constitute the bulk of the records. **General correspondence, 1906-13** (15 ft.), arranged in chronological units and thereunder alphabetically by name of correspondent, relates to many phases of the early work in drainage and erosion control. Letters exchanged between the staff of the Washington office and the engineers working in the field make up the **staff correspondence, July 1, 1909-Jan. 1, 1913** (7 ft.). Although mainly concerned with administrative details, the letters also deal with policies, the progress of investigations, and activities of outside individuals and groups interested in the work of the unit. The letters are arranged alphabetically by name of correspondent within chronological periods.

**8.18** In 1907 Charles G. Elliot, Chief of Drainage Investigations, took an extensive trip through Arkansas and Louisiana. The letters and enclosures he sent to the Acting Chief constitute the **correspondence relating to a field trip made by the Chief of**

**Drainage Investigations, 1907** (1 in.). These documents give detailed discussions of local conditions and public sentiment toward the work of the Drainage Investigations unit.

**8.19 Field office records, 1905-15** (1 ft.), consist of correspondence with the public and the Washington office, periodic work reports, and forms relating to supplies and fiscal matters. Included are records, Oct. 1911-Sept. 1912, from Roger D. Marsden at the Cypress Creek Drainage District in Arkansas, which are held by the National Archives--Southwest Region, Fort Worth, TX, and records of J.W. Wright, 1905-12, relating primarily to drainage surveys of the Florida Everglades but also to work in Louisiana and Mississippi, which are in the custody of the National Archives--Southeast Region, East Point, GA.

**8.20** Miscellaneous records include **petitions for investigations, 1907-12** (2 in.), which are formal requests from land owners in widely separated districts for drainage studies that would serve as the basis for actual drainage projects. The expenses were shared by the local group and the Department of Agriculture. Such investigative projects were covered by **cooperative agreements and contracts, 1906-12** (3 in.), drawn up by the Office of Experiment Stations with local authorities. Similar documents were signed with State experiment stations and universities to cover research on drainage. The documents, which are arranged chronologically, give a description and statement of the purpose of the project, the distribution of expenditures, and any special clauses required by the project.

**8.21** Also among the records are **orders and circulars, 1903-13** (3 in.), issued by the Secretary of Agriculture, the Office of Experiment Stations, and the Chief of Drainage Investigations relating to the progress of drainage work and administrative matters.

**8.22** Among the separately maintained photographic records are negatives documenting investigations of irrigation projects, 1908-30 (N). Images recorded show the flow and conveyance of water and the effects of drainage, tile drains, open channels, erosion, bridges, crops, canals, ditches, irrigation structures, and pumping stations.

## Records of the Berkeley Field Office

**8.23** The records of this office, which are held by the National Archives--Pacific Sierra Region, San Bruno, CA, cover the period 1889-1915 and consist of correspondence, reports, and newspaper clippings. Also included are files for Elwood Mead, Chief of the Office from 1898-1907, and Samuel Fortier, who headed the Irrigation Investigations Unit from 1907 to 1921. Some photographic records are part of a file that was maintained by the Bureau of Agricultural Engineering (8.29).

**8.24** The correspondence files constitute four series: **general correspondence, 1902-1915** (12 ft.), which is arranged chronologically and thereunder alphabetically by name of correspondent and includes requests for information from private citizens and land companies concerning irrigation and drainage problems, data, and project reports; **correspondence with the central office in Washington, DC, July 1, 1904-Nov. 30, 1915** (4 ft.), which is arranged chronologically and concerns personnel, project funding, and requests for information; and **administrative correspondence, 1912-15** (3 ft.), which is arranged numerically according to a decimal code and concerns personnel matters and project reports for North and South Dakota, Nebraska, Kansas, Oklahoma, and the Texas Panhandle. **University files, 1901-4** (1 ft.), consist of letters received concerning the responsibilities and duties of Office employees--including J.M. Wilson, Samuel Fortier, Frank Adams, H.B. Needham, and others--who also served as professors at the University of California, Berkeley.

**8.25 Draft materials and reports on irrigation in the West, ca. 1903** (1 vol., 2 in.), arranged by region, concern a bulletin issued by the Office of Experiment Stations describing various methods of water application adopted by Western irrigators, particularly in California and Montana, and recommendations for changes in the existing laws on water use. Irrigation methods and laws are the main topics covered by **newspaper clippings on irrigation subjects, May 1904-May 1905** (1 vol., 1 in.), collected from various newspapers.

**8.26** The Elwood Mead file consists of **correspondence, ca. 1905** (2 in.), arranged alphabetically by name of correspondent, concerning expenditures, personnel, instrument development, and future irrigation policy. The Fortier materials consist of **correspondence with the University of California at Berkeley, ca. 1904** (2 in.), concerning his professorial duties, and **press copies of letters sent, Bear River Canal Company, 1889-1903** (4 vols., 1 ft.), concerning the operations of the company, located in Ogden, UT, and water utilization in the Ogden area. Fortier was a consulting engineer for the company.

## RECORDS OF THE BUREAU OF AGRICULTURAL ENGINEERING

### Records of the Central Office

**8.27** Drainage engineers in the field recorded data on elevations, surveys of farms and drainage districts, readings of meters and gages measuring the flow and volume of water, soil borings, topography, vegetation, swamp surveys, demonstration farms, and service work surveys, in 5- by 8-inch volumes called **field books, 1904-38** (ca. 2,300 vols., 37 ft.). The volumes are numbered 1-3553, but not all of them were accessioned by the National Archives. The table accompanying this chapter shows the subjects and dates of the pre-1913 volumes, based on a list prepared by the Bureau and available at the National Archives. Some of the individual volumes, however, may not be included in this series.

**8.28** Source material documenting the development of the farm tractor and related agricultural implements constitutes the **tractor history records, ca. 1900-29** (5 ft.). Collected by Roy B. Gray, Chief of the Mechanical Equipment Research Division of the Bureau, the records consist largely of brochures, catalogs, and other promotional materials issued by American manufacturers of tractors and other farm implements and accessories for the period 1910-20. Also included are some catalogs from earlier and later dates, a few foreign catalogs, blueprints, design data, occasional performance figures, photographs, and correspondence with manufacturers and individuals on the development of farm tractors and the need for establishing standards for the new industry. Where possible, the records are arranged alphabetically by name of manufacturer or trade name, and some correspondence is arranged alphabetically by name of correspondent. Many of the manufacturers were located west of the Mississippi River.

### Records of the Berkeley Field Office

**8.29 Photographic files, 1903-33** (42 ft), held by the National Archives--Pacific Sierra Region, San Bruno, CA, are arranged according to a decimal code for which a file plan is available. The files include both prints and negatives covering a wide range of irrigation activities, dam construction, pipeline development, and various methods of water application used throughout the world. Nearly all of the photographs have captions. Included are images of dams, farm structures, canals, reservoirs, wells, pumping equipment, farm equipment, construction equipment, and drainage structures.

## TABLE - 8.27
## LIST OF PRE-1913 FIELDBOOKS

| State | Dates | Subject |
|---|---|---|
| Arizona | n.d. | Big Bay |
| | 1909 | Black River Levees |
| | 1906, 1911 | Boggy Bayou |
| | 1911 | Boggy Bayou Gage Reading |
| | 1912 | Boggy Lake Gage Cards |
| | 1908 | Camp Bayou |
| | 1910 | Crooked Bayou Drainage District |
| | 1910 | Curia (Curry) Creek |
| | 1912 | Cypress Creek |
| | 1912 | Cypress Creek, Notes |
| | 1910-11 | General Notes |
| | 1908 | Lonoke Drainage Project |
| | 1910 | Normal School Experiment Farm |
| | 1911 | Penitentiary Farm |
| | 1912-13 | Preliminary Exam, Notes |
| | 1908-15 | St. Francis River |
| | 1908 | Village and Running Water Creeks |
| | 1908 | Village Creek and White River Levee |
| Colorado | 1908-12 | Farm Surveys |
| Kansas | 1910 | Cottonwood River Valley |
| | 1910-11 | General Notes |
| | 1910 | Kaw River |
| | 1909 | Little Caney River |
| | 1909 | Marais Des Cygnes River |
| | 1906 | Neosho River |
| Louisiana | 1911 | Current Meter |
| | 1909 | Pumping Plant Records |
| | 1910, 1912 | Pumping Record |
| Minnesota | 1908-9 | Northwest Experiment Farm |

| | | |
|---|---|---|
| Oklahoma | 1910<br>1909<br>1910 | Black Bear Creek<br>Deep Quapaw Creek (Deep Fork Creek)<br>Little Caney River |
| Texas | 1909-14<br>1909<br>1912 | Brownsville, Lower Rio Grande Valley<br>Field Notes<br>Knox Farm |
| Washington | 1906<br>1904-6 | Colville River<br>Sunnyside District |
| Wyoming | 1903, 1907 | Big Horn Basin (Grey Bull Valley) |

# Record Group 16

## RECORDS OF THE SECRETARY OF AGRICULTURE

*It is proposed, in response to repeated inquiries, to give special attention to local statistics, to concise yet comprehensive agricultural surveys of States and Territories, which will give a fair and full showing of natural resources and their development, without coloring from local pride or pecuniary interest, and yet appreciative of natural advantages only partially improved. It is desirable that local capabilities should be accurately presented and worthy of the confidence of those who discredit the extravagances of immigration solicitors and land speculators. The plain truth is quite as much as the eastern inquirer can be induced to accept."*

*J.M. Rusk, Secretary, "Division of Statistics, The Rocky Mountain Region,"* First Report of the Secretary of Agriculture, *1889, p. 15-16.*

### INTRODUCTION

**16.1** The Department of Agriculture, which was established by an act of May 15, 1862, continued and expanded the agricultural activities that had been engaged in by the Agricultural Division of the Patent Office since 1839. The Department was headed by a Commissioner without Cabinet rank, until an act of February 9, 1889, enlarged the agency's powers and duties and made it an executive department under a Secretary. The Secretaries of Agriculture and their predecessors, the Commissioners of Agriculture, have been responsible for formulating policies and plans for the agricultural work of the Federal Government, conducting the external relations of the Department of Agriculture, coordinating the work of subordinate units of the Department, and providing general supervision of the Department's housekeeping activities. For the most part, the functions of the Office of the Secretary have remained the same, but the constant expansion and specialization of the Department as well as the personal interests of the various Secretaries have contributed to the great diversity of activity carried on by the Office and to its changing internal organization.

**16.2** For several decades the Department was engaged chiefly in the distribution of seeds and plants and in scientific and educational work designed to increase agricultural production or decrease unit production costs, prevent damage by disease and insects, and select the best varieties and breeds of plants and animals. The work of the Department has steadily expanded, however, and numerous organizational changes have been made to provide for new functions, bring together related scientific and economic work, and coordinate various research, extension, and regulatory activities.

**16.3** Isaac Newton, head of the Agricultural Division of the Patent Office in 1862, became the first Commissioner of Agriculture. His staff initially included a chemist and a superintendent of an experimental garden, but an entomologist and a statistician were soon added. Newton's early activities centered on the collection of crop production statistics, which were obtained mainly through correspondence with members of agricultural organizations and individual farmers and businessmen. His activities also included the distribution of weather reports, prepared by voluntary observers assisting the Smithsonian Institution, and the importation and distribution of choice wheat and other cereal grains and field seeds, garden seeds, and cottonseeds.

**16.4** During the incumbency of Commissioner Horace Capron, 1867-71, a botanist was added to the staff and arrangements were made with many foreign governments for the exchange of rare seeds, plants, trees, and other agricultural products. Also undertaken was an investigation of the cause and prevention of cattle fever in Texas. During the 1870's, Commissioner Frederick Watts added a microscopist to the Department's staff and carried on an extensive correspondence with farmers and other persons concerning the quality and distribution of seeds and the implements, soil, and climate most adapted to their growth. His successor, Commissioner William G. LeDuc, 1877-81, entered into considerable correspondence with sugar planters, especially in Louisiana, to ensure the production of crops to meet domestic needs. He also distributed tea plants and seeds to several States, including California, Iowa,

Louisiana, and Texas, to determine the possibilities of domestic tea culture, and directed the preparation of a detailed report on the production of American tea. During the 1880's, Commissioner George B. Loring visited various parts of the United States to inspect agricultural production work, obtain opinions of farmers concerning production, ascertain their needs from the Government, note the benefits of seed distribution, and observe breeds of domesticated animals that had been profitably introduced.

**16.5** By 1882 the Commissioner of Agriculture had general direction of work performed in the following Divisions: Gardens and Grounds, Botany, Microscopy, Chemistry, Entomology, Statistics, Forestry, and Seed. In 1883 a Veterinary Division was added to the Department to investigate the spread of contagious diseases among domestic animals. During the following year, this Division was replaced by the Bureau of Animal Industry, which was created in response to the public's demand for greater participation by the Federal Government in eradicating animal diseases; this was the first bureau to be established in the Department. Other administrative units were added to the Department in 1886, when the last Commissioner of Agriculture, Norman J. Colman, created the Division of Economic Ornithology and Mammalogy and the Division of Pomology. Also during Colman's administration, Congress passed the Hatch Act of 1887, which established the first national system of agricultural experiment stations and led to the creation of the Department's Office of Experiment Stations.

**16.6** In 1889, when the Commissioner of Agriculture became the Secretary of Agriculture with Cabinet rank, the office of Assistant Secretary was established. The activities of the Assistant Secretary tended to vary greatly depending upon the assignments given him by the Secretary (*see* 16.33-16-36). During the incumbency of Secretary Jeremiah M. Rusk, 1889-93, plans for reorganization of the Department were formulated, recordkeeping practices were systematized, new accounting methods were introduced, an experimental laboratory was built, and a "Folding Division" (later known as the Division of Records and Editing) was established. Rusk also sought new markets for the disposal of surplus staple crops and endeavored to establish closer relations between the Department and farmers. During his administration, the weather service functions of the War Department's Signal Office were transferred to the Department to be performed by the newly established Weather Bureau. Under the direction of Secretary J. Sterling Morton, 1893-97, the Department initiated studies of nutrition and soils and created the Office of Road Inquiry, the Division of Agrostology, and the Section of Foreign Markets.

**16.7** James Wilson became Secretary in 1897 and served until 1913. His lengthy tenure was marked by an unprecedented expansion of departmental programs and organizational structure. In 1901 the Office of Plant Industry and the Divisions of Soils, Chemistry, and Forestry were given bureau status. Similar status was attained by the Division of Statistics in 1903, the Division of Entomology in 1904, and the Division of Biological Survey in 1905. Established also in 1905 were the Office of Public Roads and the Office of the Solicitor. During 1905 the administration of the Federal forest reserves was transferred from the Department of the Interior to the Department's Bureau of Forestry which, some months later, became the Forest Service. The work of the Department under Secretary Wilson was also increased by the enactment of several regulatory laws. Notable among these were the Animal Quarantine Act of March 3, 1905, the Food and Drugs Act and the Meat Inspection Act of June 30, 1906, the Insecticide and Fungicide Act of April 26, 1910, the Plant Quarantine Act of August 20, 1912, and the Federal Seed Act of August 24, 1912.

**16.8** The annual reports and other publications issued by the Secretary and the Department are part of Record Group 287, Publications of the U.S. Government. Other records relating to the Secretary of Agriculture and to the activities of the Department are found among the many record groups covering agencies that are, or once were, constituent units of the Department of Agriculture. With one exception, those containing pre-1913 materials are discussed in the other chapters in this guide. The exception, the records of the Bureau of Biological Survey, are in Record Group 22, Records of the U.S. Fish and Wildlife Service, which is part of the Department of the Interior. Relevant records are also found in Record Group 48, Records of the Office of the Secretary of the Interior, which includes some records relating to the Agricultural Division of the Patent Office; Record Group 46, Records of the U.S. Senate, which includes records of the Committee on Agriculture, 1825-83, and the Committee on Agriculture and Forestry, 1883-1968; and Record Group 233, Records of the U.S. House of Representatives, which includes records of the Committee on Agriculture,

1820-1968. Records relating to expositions are found in Record Group 43, Records of International Conferences, Commissions, and Expositions, and relevant materials are described in *The Trans-Mississippi West, 1804-1912: Part I, A Guide to Records of the Department of State for the Territorial Period.*

**16.9** Most textual records, as well as some cartographic and photographic records, of the Office of the Secretary of Agriculture are described in *Preliminary Inventory of the Records of the Office of the Secretary of Agriculture* (PI 191), compiled by Helen Finneran Ulibarri. Relevant records that have been added to the record group since the inventory was published in 1979 are discussed in this chapter.

**16.10 Editorial Note:** Many records included in Record Group 16 originated after 1912, and they are not described here. Unless otherwise noted, series consisting of records that originated prior to 1913 but extending beyond that date are described in their entirety. In general no attempt has been made to determine what part of such series relates to the pre-1913 period, although in some instances chronological segments are easily discernable and these have been noted. Most cartographic and photographic records are maintained apart from the textual records. Photographic records are usually identified by alphabetic collection designators rather than by series titles; these designators are shown in parentheses.

## Records of the Agricultural Division of the Patent Office

**16.11** By the time Henry L. Ellsworth became Commissioner of Patents within the Department of State in 1836, officials of the Federal Government and other individuals had long encouraged U.S. consuls to obtain new and improved varieties of seeds, plants, and animals for importation to the United States. Ellsworth himself had been interested in the problems of agricultural improvement for some time, and with the cooperation of Members of Congress and agricultural societies, he soon began collecting and distributing new varieties of seeds and plants. In 1839 Congress established the Agricultural Division within the Patent Office and allotted $1,000 for the collection of agricultural statistics and other agricultural purposes. Ellsworth's interest in aiding agriculture was evident in his annual reports, which called for the establishment of a public depository to preserve and distribute the various new seeds and plants, the employment of a clerk to collect agricultural statistics, the preparation of statewide reports about crops in different regions, and the application of chemistry to agriculture.

**16.12** Because the annual reports of the Patent Office proved to be a good medium for the dissemination of agricultural data, they contain considerable statistical information as well as papers on making sugar from cornstalks, field experiments with wheat and corn, potato diseases, the importance of agricultural education in controlling insects, analyses of soils and fertilizers, and the improvement of dairy animals.

**16.13** In 1849 the Patent Office was transferred to the newly created Department of the Interior. An ongoing agitation for either a separate bureau of agriculture within the Department or a separate department devoted to agriculture led to the establishment in 1862 of an independent Department of Agriculture without Cabinet status. The act (12 Stat. 387) establishing the Department of Agriculture stipulated that its head, the Commissioner of Agriculture, should "receive and have charge of all the property of the agricultural division of the Patent Office in the Department of Interior...." This provision was interpreted as an authorization to transfer the files of the Agricultural Division to the Department of Agriculture. The records described below were transferred to the new agency, but some pertinent records remained in the Office of the Secretary of the Interior, including a small quantity of letters received, 1849-62, and some outgoing letters of the Division that are transcribed in bound volumes of letters sent concerning Patent Office business. As previously noted (16.8), these may be found in Record Group 48.

**16.14** The transferred records consist of chronologically arranged and bound **letters and reports, 1839-60** (21 vols., 4 ft.). A name index is included at the beginning of each volume, and a chronological summary of the contents of the letters, essays, and reports contained in each volume is available. Subject access is afforded by an alphabetical listing of subjects, prepared by a member of the National Archives staff.

**16.15** The records pertain mainly to the collection and distribution of foreign seeds and plants and to the preparation and distribution of the annual reports of the Commissioners of Patents, which were issued by Congress as Senate and House documents and published as part of the Congressional Serial Set. The records pertaining to the annual reports include letters from farmers sent in response to circulars issued by the Agricultural Division seeking informa-

tion on crop conditions and prospects and on agricultural practices; copies of completed questionnaires; letters concerning the preparation of articles and essays or requesting copies of the annual reports; and original copies of articles and essays appearing in the annual reports. The records pertaining to the collection and distribution of foreign seeds and plants include requests from agricultural societies and farmers for seeds and plants from and reports on the cultivation of such seeds and plants. Some of the reports deal with native grasses, the study of European markets for cotton, analyses of corncobs, and the development of sprays for orange trees. The alphabetical subject list includes references to documents concerning grape culture in Arkansas; wine production and horticultural societies in Arkansas; wine production, the Los Angeles Vineyard Society, and horticultural societies in California; the Minnesota Territorial Agricultural Society and agricultural societies in Missouri and Texas; agricultural organizations in Iowa and Louisiana; agricultural possibilities in Kansas and Nebraska; and natural products of Kansas. General subjects covered include the need for agricultural education, animal husbandry, the importation of camels, cattle disease, drainage work, crop deficiencies caused by the drought of 1854, guano, insects, sheep raising, soil investigations, the introduction of new varieties of wheat, and the collection of meteorological data.

## Records of the Immediate Offices of the Commissioner and Secretary of Agriculture

**16.16** Under its organic act of 1862 the Department of Agriculture was headed by a Commissioner who was authorized to "acquire and preserve in his Department all information concerning agriculture" that he could obtain from publications, correspondence, experiments, and any other "appropriate means within his power." Only a few extant records relating to the work of the Commissioners of Agriculture for the period 1862-89 have been found. These show that, although the Commissioners initiated some scientific research, they mainly spent time on personnel matters, publication of reports, and distribution of free seeds. The paucity of documentation is offset somewhat by the published annual reports of the Commissioners (see 16.28), which serve as an alternate source of information about the activities of the Commissioners and the various components of the Department during this period. When the Department was given Cabinet status in 1889 the Office of the Commissioner became the Office of the Secretary. Since that time, the Secretaries of Agriculture, in general, have provided the same kind of general policy and planning direction as their predecessors, although the functions of the Department have expanded greatly. From its small staff of less than 50 in 1862, the Department has grown to an organization in the 1990's that employs thousands of persons in varied research, regulatory, informational, legal, and administrative activities.

### Correspondence and Related Records

**16.17** The earliest available records consist of press copies of **letters sent by the Commissioners of Agriculture, 1879-85** (4 vols., 6 in.), arranged chronologically. The first two volumes, covering the years 1879 and 1880, include name indexes. The letters pertain to requests for seeds and for publications and reports on agricultural problems. Many of the pages are faded and illegible. A more extensive series consists of press copies of **general letters sent, 1882-97** (61 vols., 7 ft.), that span the changeover from Commissioner to Secretary. Each volume is labeled "Domestic" and contains a name index. The letters are replies to inquiries about the identification of certain plants and animal diseases, requests for copies of Department publications and for seeds, and queries about the most favorable area for cultivating various agricultural products. After 1890 many letters reflect a new function of the Department--the work of the Weather Bureau. A third series, which also spans the change in departmental status, is made up of press copies of **letters sent to Congressmen, 1886-93** (12 vols., 1 ft.), concerning requests for seeds, crop reports, and statistics, requests for positions for constituents, and requests for establishment of experiment stations. These letters are arranged chronologically, and each volume contains a name index.

**16.18** The **letters received by the Secretary of Agriculture, 1893-1906** (25 ft.), are arranged by year and thereunder by name of sender. In addition to the incoming letters, this series also includes reports and memorandums received from Government officials and private individuals about such subjects as the work of the Weather Bureau, translations from foreign journals relating to agricultural problems, development of food nutrition studies, pending legislation concerning pure food, proposed work on agricul-

tural marketing statistics, and irrigation studies. Access to the portion of the letters beginning in 1903 is facilitated by two card indexes. (Because the Department did not begin indexing its correspondence until 1903, no official index exists for the years 1893-1902. Fortunately, the number of letters for those years is relatively small.) A **subject index, 1903-6** (4 ft.), arranged by subject and thereunder by date, provides the name of the sender (person or Government agency), the date, and an abstract of the letter. **An index to letters received concerning personnel, 1903-6** (1 ft.), is arranged by name of applicant, and the entries give the name of the applicant, the date, and an abstract of the letter. Both indexes are on 5- by 8-inch cards.

**16.19** Also available for use in conjunction with the letters received is a name index to the entire series, 1893-1906, compiled by a staff member of the National Archives. This list includes references to documents from 1905 relating to Governors in California, Missouri, Nebraska, Oklahoma, Oregon, and South Dakota; to documents relating to agricultural colleges and experiment stations; and to documents concerning numerous organizations located in the trans-Mississippi West, such as the Arizona Horticultural Science Society (1906), the Arkansas Cotton Oil Company (1905), the California Canneries Company (1876), the Colorado, Oklahoma and Gulf Railroad Company (1905), the Iowa Old Settlers Association (1906), the Louisiana Purchase Exposition (1903-6), the Minneapolis Cold Storage Company (1903), the St. Louis Ice Manufacturing and Cold Storage Company (1894), the Spokane Humane Society (1906), the Utah Fertilizer Company (1904), and the Yellowstone Park Land and Irrigation Association (1894).

**16.20 The letters sent by the Secretary's office, 1893-1941** (1,129 vols. and unbound material, 351 ft.), deal with departmental programs, administrative matters including the Secretary's public appearances and speeches, employment within the Washington office and the field, legislative developments, and numerous agricultural meetings and congresses. The letters, most of which are addressed to private citizens, although many were sent to Congressmen and Government officials, are arranged alphabetically by the name of the office or bureau that prepared the letter for the Secretary's signature and thereunder chronologically.

**16.21** This is an almost complete set of copies of all letters signed by the Secretary. Many of the letters were prepared by the bureaus of the Department, and the main file on any particular subject to which these letters relate would be located among the records of the bureau most concerned with the subject. Other copies of these letters, especially those sent after 1912, may be found in the general correspondence of the Secretary (16.23). Until 1929, press copies were entered into bound volumes, and all volumes of letters originating in any one office were assembled in chronological sequence. Those segments of the series containing letters sent before 1913 are listed below:

Office of the Secretary, 1893-1929 (329 vols.)
Bureau of Animal Industry, 1894-1929 (116 vols.)
Bureau of Biological Survey, 1906-29 (20 vols.)
Bureau of Chemistry, 1906-29 (56 vols.)
Bureau of Entomology, 1906-29 (8 vols.)
Office of Experiment Stations, 1906-15; 1923-29 (6 vols.)
Forest Service, 1906-29 (155 vols.)
Insecticide and Fungicide Board, 1910-27 (1 vol.)
Library, 1906-29 (2 vols.)
Bureau of Plant Industry, 1906-29 (47 vols.)
Publications, 1902-25 (16 vols.)
Bureau of Roads and Rural Engineering, 1906-29 (23 vols.)
Bureau of Soils, 1906-27 (9 vols.)
Office of the Solicitor, 1905-29 (213 vols.)
Bureau of Statistics, 1906-14 (5 vols.)
Weather Bureau, 1897-1929 (14 vols.)

After 1929 carbon copies of the outgoing letters were filed in folders according to office of origin, and each year a new file was started for each office. This arrangement limits the usefulness of the unbound letters for ordinary subject investigations, but they may be used to supplement the general correspondence file, which is arranged by subject. All of the bound volumes have been reproduced in National Archives Microfilm Publication M440, *Letters Sent by the Secretary of Agriculture, 1893-1929* (563 rolls). The unbound records, 1930-41, have not been filmed.

**16.22** The Department developed several indexes to the letters sent. Those covering the period 1903-6 were compiled on 5- by 8-inch cards; those for the period 1906-29 are on 3- by 5-inch cards. A **name index to letters sent by the Office of the Secretary, 1903-6** (6 ft.), is arranged by name of recipient and thereunder chronologically. Entries show to whom the letter was sent, the date, the name of the bureau

or office that prepared it, the volume in which it can be found, the appropriate page number, and an abstract of its contents. Similar information is provided by the following indexes: **subject index to letters sent by the Office of the Secretary, 1903-6** (5 ft.), arranged by subject and thereunder chronologically; **index to letters sent to Government agencies, 1903-6** (1 ft.), arranged by name of Government agency; and **index to letters sent concerning personnel, 1903-6** (3 ft.), arranged by name of individual. These indexes were replaced by a **name index to letters sent by the Office of the Secretary, 1906-29** (135 ft.), and a **subject index to letters sent, 1906-29** (78 ft.). The information these indexes provide is similar to that given in the 1903-6 indexes.

**16.23 The general correspondence of the Office of the Secretary, 1906-75,** was originally called the "subject file" because the correspondence is arranged by year and thereunder by subject. This is the principal series of records produced by the Secretary's office, and annual segments of the file and its accompanying index (16.26) are periodically sent to the National Archives. The 1906-13 segment of the correspondence file consists of approximately 49 linear feet of material.

**16.24** This series is made up of letters, memorandums, reports, and other documents received and copies of letters sent and similar outgoing documents. Some duplication of letters sent exists between this file and the series of letters sent described above (16.20), but in many instances, copies of letters sent that are missing from this file, particularly prior to 1920, may be found in that series. For the period covered, this series is the best primary source of information on the relationship of Government to agriculture, and it contains significant materials for investigations of other phases of agriculture and public administration. Created at a high administrative level, these records concern policy, organization, and procedure, and include not only the correspondence of the Secretary but also a large proportion of the documents that were received or prepared by the Assistant Secretary and Under Secretary, by property, fiscal, and personnel officers connected with the Secretary's office, and by special assistants and committees appointed by the Secretary. Some documents summarize the results of work done elsewhere in the Department.

**16.25** The general correspondence covers a wide range of subjects and includes substantive documentation of the plight of the farmer during periods of economic depression; farm tenancy; and programs of conservation, irrigation, and land utilization, including retirement and development of submarginal land, and reclamation. Other subjects include duststorms; shelter belts; rural area development; rural credit; drought; smelter fumes; results of research and experimental work done at research centers; agriculture of particular localities; farm legislation; and conferences, congresses, and varied meetings. A list of the hundreds of subjects and the dates of the letters received for the years 1906-56 is available in the National Archives. A select list of subjects covering the 1906-13 period is provided in the table accompanying this chapter, but there is no easy way to determine how many of the documents filed under the various subject headings concern the trans-Mississippi West.

**16.26** The **index to the general correspondence of the Office of the Secretary of Agriculture, 1906-75,** is arranged by year and thereunder by name of correspondent, Federal government agency, State agency, organization, or foreign government. Entries were recorded on 3- by 5-inch cards for the period 1906-41 and thereafter on 8- by 10-inch sheets. Each card or sheet shows the date of the letter indexed, a summary of its contents, and the subject heading under which the letter is filed. The copies of letters sent show the subject heading used in filing the related incoming records. The segment of the index covering the 1906-13 period consists of approximately 47 linear feet of cards.

Procedural Records

**16.27** The functions and laws governing the work of the organizational units of the Department in the late 19th century are outlined in a **summary statement of functions and laws relating to the Department, 1897** (1 vol., 1 in.). The statements are arranged by name of office, division, or bureau. Copies of orders, memorandums, and circulars sent to chiefs of bureaus, other officers, and employees of the Department make up the series of **directives, 1897-1941** (6 ft.), and concern personnel actions, organizational changes, departmental policies, and other matters.

Publications

**16.28** The annual report on agriculture began in 1837 with a two-page statement in the report of the Commissioner of Patents, and continued as a part of

the Commissioner's report until 1861, being published as a separate volume after 1849. After the Department of Agriculture was established in 1862, its annual report was uniformly issued up to 1893, routinely containing the Commissioner's or Secretary's report; the purely executive reports of the several chiefs of bureaus, divisions, and offices; and special articles on agricultural matters. For the period 1862-89, when departmental records are scarce, the annual reports are a particularly useful source of information on departmental activities in or relating to the States and Territories west of the Mississippi River.

**16.29** Fairly typical of the early reports is the one for 1870, in which the "Report of the Statistician" provides statistical data on such subjects as the number and value of livestock in each State and in the "Territories" as a single unit (i.e., combined figures only under the "Territories" heading); the principal crops and yield per acre for each State and the "Territories"; and the market prices of farm products at New Orleans, LA, and St. Louis, MO. The "Report of the Entomologist" includes information on the Rocky Mountain grasshopper, particularly destructive in Utah, which "bred in waste places where only Indians and wild animals roam," and the Colorado or western potato-bug, which, since its discovery in the Far West in 1861, had traveled eastward approximately 60 miles a year and by 1870 was found in Minnesota and as far east as Ohio. The "Report of the Chemist" includes a section on Western alkali soils and discussions of chemical analyses of a meat extract produced for the U.S. Army by a company in San Antonio, TX, and of the soap berry and the juniper berry, both used as food by some Indian tribes.

**16.30** The berries were submitted for chemical analysis by Dr. Edward Palmer, whose study "Food Products of the North American Indians" was one of the numerous research papers published in the 1870 report that bear directly on the trans-Mississippi West. Other pertinent papers concern the beet-sugar industry, grasses of the Plains and eastern slope of the Rocky Mountains, forest culture, the pastoral lands of America, the Texas cattle-trade, agricultural resources of Wyoming, the Great Salt Lake Basin, the colonization of Union Colony in Colorado Territory, and Chinese labor in agriculture. Also included is an extensive digest of annual reports made by State agricultural agencies or organizations, a feature also found in the annual report of the Secretary for 1873.

**16.31** The number of research papers published in the annual reports varied from year to year. Most of the reports through 1880, however, include at least one paper on a western-related topic. The following are examples: a paper on agricultural colleges, including a section on the State agricultural colleges in Iowa and Kansas (1865); a report on the public domain, including descriptions of lands in Arizona, California, Colorado, Dakota, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming, and sections on homesteads in Arkansas and Louisiana after 1866, the U.S. land offices, and the extent of the public lands in the various States and Territories (1868); a report on progress in industrial education as reflected by agricultural education programs offered by colleges and universities in various States including Arkansas, California, Iowa, Kansas, Minnesota, Missouri, Nebraska, Oregon, and Texas (1873); a catalogue of forest trees of the United States and a report on improved Minnesota flour (1875); a study of agriculture and soils of California and a survey of forest resources of the Western States and Territories as reported by military officers assigned to installations in Arizona, Dakota, Idaho, Indian, Montana, New Mexico, and Washington Territories, and in California, Colorado, Kansas, Nevada, and Oregon (1878); and a report on the investigation of Texas cattle fever (1880).

**16.32** During the 1880's, as the functions of the Department increased and the annual reports of the component units became more detailed, the number of research papers published in the Secretary's annual reports decreased dramatically. Finally, in 1894 the Department began publishing papers of this nature in a separate series of annual volumes called yearbooks. These publications contain the Secretary's report, illustrated popular articles giving results of experiments and investigations and practical information on agricultural subjects, and appendixes designed to serve as a handbook of useful information for the farmer. Both sets of publications, the annual reports and the yearbooks, are generally available at large reference libraries. Record copies are in Record Group 287 (see 16.8).

### Records of the Offices of the Assistant Secretary and Under Secretary

**16.33** The Office of Assistant Secretary was established by the act of 1889 that conferred Cabinet status on the Department. The functions of the Assistant Secretary were not precisely defined and have

varied from one incumbent to another. The first Assistant Secretary appointed was given immediate supervision of the scientific work of the Department, with special control over an investigation of textile fiber production, being carried out by a special agent. No distinct series of records were maintained to document these functions, but some relevant information may be found in a series of letters sent by the Assistant Secretaries. No comparable collection of letters received has been found, but letters to the Assistant Secretaries were frequently filed in the Secretary's general correspondence.

**16.34** The **letters sent by Assistant Secretaries of Agriculture, 1889-1929** (130 vols., 21 ft.), are arranged chronologically, with an index at the beginning of each volume. Addressed to agricultural college officials, private individuals, and Congressmen, the letters concern such subjects as the Department's exhibit at the World's Columbian Exposition in Chicago, IL; construction of telegraph lines for Weather Bureau stations; requests for publications and seeds; the identification of plant and animal diseases; and improved methods of production as developed in the laboratories of the Department. The letters for the years 1889-94 are reproduced as National Archives Microfilm Publication M122 (16 rolls).

**16.35** An act of 1890 authorized the Secretary of Agriculture to make preliminary investigations to determine the proper location for artesian wells for irrigation purposes within the region between the 97th longitude and the eastern foothills of the Rocky Mountains. To accomplish the task, an Office of Irrigation Inquiry, also called the Artesian Well Investigation, was established, which functioned until June 1896. The Office was headed by a Special Agent in Charge and came within the purview of the Assistant Secretary. **Press copies of letters sent by the Office of Irrigation Inquiry, 1890, 1891, and 1893-95** (10 vols., 1 ft.), are arranged chronologically, with a name index at the beginning of each volume. The letters, directed mainly to field agents, geologists, State engineers, land agents, and Congressmen, concern the collection of data on irrigation and artesian wells necessary to compile and publish information about the best methods of cultivating irrigated lands.

**16.36** From March to September 1897, Assistant Secretary Charles W. Dabney served as "Special Agent in Charge of Scientific and Statistical Investigations." His function was to supervise the scientific work and make recommendations to the Secretary. The **press copies of letters sent by Charles W. Dabney, 1897** (1 vol., 1 in.), include some letters relating to the identification of certain insects that attacked fruits and vegetables. Most of the letters, however, relate to the Department's exhibit at the Tennessee Centennial Exposition and related expenses, and to the activities of Sheldon Jackson, General Agent for Education in Alaska, Department of the Interior, who was to collect information regarding agricultural possibilities in Alaska.

## Records of the Office of the Solicitor

**16.37** In 1905, by order of the Secretary, a solicitor was appointed, with responsibility for the legal work of the Department. Five years later the Secretary, in accordance with an appropriation act, directed that all legal work of the Department be performed under the supervision and direction of the Office of the Solicitor. The records reflect the duties of the Office in drafting proposed legislation, preparing legal papers, interpreting laws enacted by the Congress, and aiding in the preparation of numerous regulations and orders required for the effective administration of laws relating to the activities of the Department. In addition, the records show that the Office examined evidence to determine possible violations of laws or rulings of interest to the Department; represented the Department at hearings; prepared pleadings and briefs; cooperated with the Department of Justice in handling civil and criminal cases; examined contracts, deeds, mortgages, and leases; prepared and prosecuted applications for patents on behalf of employees of the Department in instances where their inventions might have been used in the public interest; and examined the titles to lands authorized for purchase or on which loans may have been made by the Department.

### Correspondence and Related Records

**16.38** The early **correspondence of the Solicitor, 1904-11** (58 ft.), is arranged numerically, and access is provided by the **index to numerical correspondence, 1904-11** (10 ft.). Compiled on 3- by 5-inch cards, the entries are arranged by name of correspondent, Government agency, or subject, and most of them give the date, a short abstract of the letter, and the number under which the letter is filed. Some entries provide cross-references. The letters themselves are to and from various associations, Government officials, boards of trade, and private individu-

als about alleged violations of statutes entrusted to the Department for execution. The correspondence deals primarily with enforcement of the Twenty-Eight Hour Law, the Food and Drugs Act, the Meat Inspection Act, the Insecticide and Animal Quarantine Acts, and legal work for the Forest Service in land acquisition and land-use transactions. A few general file categories relate to more than one State. File "666," for example, includes documents regarding the livestock laws in Arizona, California, Colorado, Idaho, Montana, Nevada, Oklahoma, Oregon, and Utah, and file "1083" covers documents relating to State boards of health or State health officials in California, Colorado, Iowa, Kansas, Louisiana, Nebraska, Oklahoma, South Dakota, Texas, and Washington.

**16.39** The Solicitor's **general correspondence, 1910-42** (239 ft.), is arranged in two chronological segments, 1910-37 (68 ft.) and 1937-42 (171 ft.), and thereunder by subject. The subjects include claims, reports, contracts, agreements, proposed legislation, enforcement of various statues, acquisition of land, and matters relating to the administrative problems of the various divisions and bureaus. The correspondence shows the Solicitor's role in the preparation of administrative rules, regulations, orders, and proclamations, and presents his opinions concerning legal problems arising in departmental work. An index to this series is available, but it does not begin until 1918.

Case files and Related Records

**16.40** The Animal Quarantine Act of March 3, 1905, and an amendment to the act enabled the Secretary to establish and maintain quarantine districts in order to permit and regulate the movement of cattle and other livestock from those districts. **Animal quarantine case files, 1909-38** (8 ft.), arranged numerically, usually include reports of a violation, the subsequent investigation, and correspondence of the Solicitor with the Attorney General.

**16.41** An act of May 25, 1900, and amendments empowered the Secretary of Agriculture to prohibit violation of the law dealing with the transportation and shipment of skins and hides of animals and birds in interstate commerce. The **Lacey Act case files, 1912-39** (7 ft.), arranged numerically, include a statement of criminal information, supporting affidavits, correspondence of the Secretary of Agriculture and the Attorney General, and a statement about the disposition of the case.

**16.42** The Twenty-Eight Hour Law (act of June 29, 1906) empowered the Secretary of Agriculture to limit the amount of time animals spent in transit and in continuous confinement to not more than 28 consecutive hours. Arranged numerically, the extensive **Twenty-Eight Hour Law case files, 1907-42** (54 ft.), generally contain a statement of complaint, completed waybills, reports of violations, and a statement about the disposition of the case.

**16.43** Federal meat inspection at slaughtering and processing establishments engaged in interstate and foreign commerce was authorized by an act of June 30, 1906. The relatively extensive series of **meat inspection case files, 1908-41** (23 ft.) is arranged numerically. A typical file includes the report of the inspector, a report of the violation, a draft of the indictment, supporting affidavits, and a statement about the disposition of the case.

**16.44** June 30, 1906, was also the date of the Food and Drugs Act, which covered food and drugs shipped by interstate commerce or manufactured or offered for sale in the Territories or in the District of Columbia. **Notices of Judgment obtained in cases brought by the Food and Drug Administration and its predecessors, 1910-38** (3 ft.), include copies of printed briefs and other documents relating to what the Department called the "Whiskey Case," an investigation concerned with the chemical components of "whiskey." Among the manufacturers involved were Western Distillers, Agnew, CA, and the Louisiana Distillery Co., Ltd.

**16.45** The 1910 Insecticide and Fungicide Act empowered the Secretary of Agriculture to prevent the manufacture, sale, or transportation of adulterated or misbranded insecticides and fungicides. The act applied to both domestic and imported products. Like the case files described above, the **insecticide and fungicide case files, 1910-43** (43 ft.), are arranged numerically. Unlike the others, these files are indexed. Compiled on 3- by 5-inch cards, the **index to insecticide and fungicide cases, 1910-35** (93 ft.) shows whether the product was produced domestically or imported; gives the names of the company involved, the product, and the State; and provides the case number. The prefix "I and F" is part of each case number. A typical case file includes a report of analysis, a charge sheet, a summary and recommendation statement after the citation, supporting affidavits, and a statement about its disposition.

**16.46** In his annual report submitted to the Secretary on October 1, 1912, the Solicitor stated that

during fiscal year 1912 his office had handled 1,568 cases involving claims to lands within the national forests under the homestead, timber and stone, mineral, lieu selection, and other special and general land laws of the United States. Some of these cases are represented in the **closed case files relating to claims to lands in the national forests, 1910-36** (94 ft.), which are arranged according to a numerical classification scheme. Each numerical segments is arranged alphabetically by name of claimant. A typical file consists primarily of letters concerning the background of the claim and copies of departmental decisions. Cases mainly concern homesteading, mineral and coal claims, grazing and timber trespass, and requests for power permit and rights of way.

**16.47** The Weeks Law of 1911 provided for State and Federal cooperation in protecting the watersheds of navigable streams and for the creation of a commission to acquire lands necessary to protect navigable rivers. The **closed case files relating to the acquisition of land for forest purposes, 1911-42** (471 ft.), contain correspondence, copies of vouchers, and Attorney General's opinions pertaining to the purchase and condemnation of land for national forests in accordance with the provisions of the Weeks Law. The records are arranged in three chronological segments: 1911-19 (approximately 92 ft.), 1920-38, and 1939-42. The records in each segment are arranged mainly alphabetically by name of vendor.

**16.48** The numerically arranged **miscellaneous unclassified case files, 1891-1940** (8 ft.), concern such matters as violations of laws forbidding false advertising, wage claims, and assault on Department of Agriculture employees. A typical file consists of correspondence of the company or individual with the Solicitor, correspondence of the Solicitor and the Department of Justice, and a statement about the disposition of the case. Files 5 through 160 cover the pre-1913 period, and a few of them are relevant. No. 18, for example, concerns the claim of Avery T. Crary and Allen Packer of Iowa, and Albert A. Knott of Colorado, for $9,193 for a consignment of sheep they purchased in Mexico. The sheep were brought into the United States through El Paso, TX, where they were inspected by officers of the Department who declared them infected with disease and had them slaughtered. The case was heard by the Court of Claims, and some of the printed court documents are included in the file.

**16.49** Reports of surveys of boundaries of various tracts of forest land are among the **records of title attorneys, 1911-37** (6 ft.), which also include correspondence, lists of land under option, and copies of legal opinions. These records are arranged alphabetically by subject. Files on Arkansas, California, Colorado, Idaho, Iowa, Minnesota, Missouri, Nebraska, New Mexico, North Dakota, and Oklahoma are included, but the documents postdate 1912. The Iowa file, however, does contain a report that reviews the Forest Service program in that State.

**16.50 Correspondence relating to cooperative agreements, 1911-37** (1 ft.), arranged chronologically, relates to agreements between various bureaus of the Department of Agriculture and other Federal agencies, universities, and State agricultural departments concerning varied research and regulatory investigations. Some products of research by Department employees are the subject of the series **records about patent cases, 1909-44** (46 ft.), which is arranged by case number. These files consist of copies of correspondence and applications for patents for inventions by employees of the Department of Agriculture. Although it cannot readily be determined, some of the employees may have worked at departmental installations west of the Mississippi. The case file usually shows the outcome of the application.

**16.51** A series of the Solicitor's **legal opinions, 1910-37** (7 ft.), is arranged in rough chronological order by date of opinion. Topics covered include livestock importation, grain inspection, activities in the National forests, cooperation with State and local governments, and the correct use of particular appropriations.

## Records of the Office of Information

**16.52** The Office of Information was established in 1913 as a press service for the Department. After it was combined with the Division of Publications in 1925, the Office had responsibility for the general direction and supervision of publication and other information policies and activities incident to the preparation and dissemination of the results of the Department's work. **Records relating to exhibitions and expositions, 1889-1949** (4 ft.), document activities associated with planning and organizing the Department's participation in national and international exhibitions and expositions. Although most of the material relates to post-1913 expositions, a few documents pertain to the Louisiana Purchase Exposition in 1904. Among these are reports on the exhibits presented by colleges of agriculture and mechanical

arts and their experiment stations and by the Bureau of Plant Industry. The latter report is generously illustrated with photographs. Also available are materials relating to exhibits at the Lewis and Clark Centennial Exposition at Portland, OR, in 1905, and the Alaska-Yukon-Pacific Exposition at Seattle, WA, in 1909. Other items of interest concern the annual meetings of the International Dry-Farming Congress held in Tulsa, OK, in 1913, and in Wichita, KS, in 1914. A file labeled "Exhibits-Historical Data" contains a report reviewing the history of the Department's participation in these and other expositions from 1876 to 1927.

### Records of the Chief of the Division of Accounts and Disbursements

**16.53** The small staff assembled by the first Commissioner of Agriculture included a Disbursing Clerk. In 1873 the title was changed to Disbursing Clerk and Superintendent of Building, and in 1883 the incumbent became known as Chief of the Division of Accounts and Disbursements. By 1893 all transactions pertaining to the expenditures of the Department were prepared and completed in the Division, which maintained all records relating to the fiscal and accounting transactions of the Department.

**16.54** The principal series is the **record of payment by disbursing officer, 1867-1921** (197 vols., 42 ft.), arranged chronologically by fiscal year. Volumes for the years 1869 to 1877, 1898, 1901, 1903, and 1904 are missing. Most volumes list on one side of the page the amount of the appropriation and the purpose for which the money was to be spent; the other side of the page shows the amount brought forward, date, number of voucher, purpose of expenditure, to whom paid, and the amount expended. Some exceptions to the arrangement of the contents are found. The volume for 1882-84, for example, is broken down into the following categories: salaries, collecting statistics, laboratory, purchase and distribution of seeds, experiment in culture of tea, experimental garden, museum, furniture, cases and repairs, library, insect investigations, examination of wool, animal disease investigations, and machinery in the manufacture of sugar. Separate volumes are found for the Weather Bureau from as early as 1891 and for the Bureau of Animal Industry, 1900. **Expenditure ledgers, 1893-1900** (4 vols., 4 in.), are arranged chronologically, with subject indexes in the volumes for 1894-96 and 1896-97.

**16.55** **Appropriation journals, 1872-1906** (28 vols., 5 ft.), arranged chronologically, provide a detailed breakdown of disbursements. Each volume is indexed by subject. Volumes for 1878-84, 1890-91, and 1894-99 are missing. **General appropriation ledgers, 1906-21** (27 vols., 13 ft.), were used to record expenditures under appropriations for organizational units, functions, and special activities of the Department. Such activities included nursery plant inspection and quarantine cooperative, fire protection of forested watersheds, investigation of rural cooperatives, and domestic potato quarantine. The volumes are arranged chronologically. A series of **liability ledgers, 1899-1904** (5 vols., 1 ft.) is arranged by fiscal year and thereunder by appropriation item. The ledgers show the amount appropriated by Congress for a particular type of scientific investigation and supporting administrative services. Included are lists of personnel and salary expenditures.

**16.56** A bound **record of contracts, leases, and agreements, 1890-1902** (1 vol., 1 in.), contains copies of leases, copies of letters about renewal of leases, and a tabular list of leases and renewals showing location of Department premises, name of lessor, period covered, and amount of rent for the period 1896-1902. Some of the properties involved were in the West.

### Records of the Office of the Chief Clerk and the Office of Personnel and Business Administration

**16.57** In the early years of the Department, the Chief Clerk performed many auxiliary services. By 1917 his responsibilities included general supervision over clerks and employees, and his office prepared papers relating to appointments and promotions. In 1925 the Office of Chief Clerk was consolidated with several other small units of the Secretary's Office to become the Office of Personnel and Business Administration. Although most of the records created by the Office of the Chief Clerk are peripheral to the subject of this guide, some of correspondence and the personnel records inherited by the Office of Personnel and Business Administration include relevant information.

**16.58** Press copies of **letters sent, 1893-1929** (159 vols., 17 ft.), are arranged chronologically, and each volume contains an index by name of correspondent. These letters concern the varied responsibilities of the Chief Clerk relating to personnel, rec-

ordkeeping, building management, and fiscal operations. Some of the letters are relevant to this guide, but the lack of a subject index makes them difficult to access.

**16.59** Records of leading Department employees, some of whom were undoubtedly involved in activities affecting the Western States and Territories, make up a series of **selected personnel files, 1862-ca. 1940** (5 ft.). Arranged alphabetically by name of employee, these files were gleaned from a larger accumulation of personnel files transferred to the National Personnel Records Center in St. Louis, MO. Entries in the **registers of employees, 1907 and 1908** (2 vols., 6 in.), which are arranged by name of bureau and thereunder alphabetically by name of employee, show the State from which each employee was appointed. Also given is the employee's title, compensation, and date of appointment. **Records relating to field personnel, 1912** (1 in.), consist of correspondence and reports about the distribution of field employees among the bureaus of the Department. The records are arranged by name of bureau.

## Records of the Library

**16.60** The Library originated in the Agricultural Division of the Patent Office. When the new Department of Agriculture was established, it inherited the Division's entire collection of 1,000 volumes of agricultural statistics. The first Commissioner outlined as one of his objectives the establishment of an agricultural library and museum. Appropriations for the purchase of a library were provided in 1864, but its development was slow until 1893, when a new librarian was appointed through Civil Service examination and modern library methods were introduced. The records of the Library deal with the formative pre-1893 period and as such show the types of publications acquired, methods of acquisition, nature of inquiries, and type of replies.

**16.61** The records selected for discussion here show the location of the persons seeking information about agricultural subjects. No segregated series of incoming letters exists, but entries in a **register of letters received, 1869 and 1870** (1 vol., 2 in.), are arranged alphabetically by name of geographical location or individual. Communications were received from domestic and foreign correspondents seeking publications and information on such subjects as cotton, geology, mining, and veterinary science. **Registers of visitors, 1869-76, 1878, and 1879** (8 vols., 2 ft.), give signatures of domestic and foreign visitors to the Department of Agriculture and their place of residence. Finally, chronologically arranged **copies of letters sent, 1873-80, 1885-95** (5 vols., 5 in.), document the relationship between the Library and various State organizations. Many letters are to State societies, boards of trades, and chambers of commerce requesting reports, Governors' messages, State censuses, transactions of State Boards of Agriculture, and books pertaining to mineralogy, pomology, entomology, and other aspects of agriculture.

## General Cartographic and Photographic Records

### Cartographic Records

**16.62** Filed apart from the textual records are **county outline maps of the United States, 1840-1940** (approx. 30 items), arranged chronologically, which were prepared by the Department to plot agricultural statistics for each 10-year census period beginning with 1840. The maps are of two kinds, those printed in a light blue color and including county names, and those printed in black ink and showing county boundaries. Included are a few maps for non-census years, such as 1909, and a few duplicate maps. Among the map-related publications of the Department making up the series of **published atlases and graphic summaries, 1889-1948** (23 items), is an "Album of Agricultural Statistics of the United States," prepared under the direction of the Department's statistician to show percentages of farmland, crops, rural population, and farm tenure by State in 1889. Other published records include **maps showing field activities of the Department of Agriculture, 1912-30** (3 items), with one map dated 1912.

### Photographic Records

**16.63** Among the separately maintained photographic records are historical photographs, 1900-64 (G), arranged alphabetically by subject, which document all phases of U.S. agriculture and rural life. Subjects include farmers and their families, soil conservation methods, planting and harvesting of crops, and marketing procedures; care and raising of livestock; farm equipment and farm buildings; pests and their control; research activities; and food preparation and preservation. Also included are pictures of Department officials and other personnel, agency build-

ings, and experimental farms. Photographs of agricultural exhibits at several expositions, 1901-34, are arranged in broad subject categories, including places, expositions, and plants (**FLS**). These photographs were collected by Frank Lamson-Scribner, a Special Agent in Charge of Department exhibits for many national and international expositions, including the Louisiana Purchase Exposition, and some of the photographs relate to the Lamson-Scribner family. A few views of the Louisiana Purchase Exposition, 1904, and the Lewis and Clark Exposition, 1905, are included in a group of Agriculture Department Press Service negatives, 1901-43 (**PSA**).

**16.64** Photographic prints of oil paintings of officials of the Department and other individuals important in the history of U.S. agriculture, 1794-1933, were made by the Office of Information (**P**). The portraits include Henry Leavitt Ellsworth, 1791-1858, who, as the first Commissioner of Patents, was known as the "Father of the Department of Agriculture"; Isaac Newton, 1800-67, first U.S. Commissioner of Agriculture; and Justin Smith Morrill, 1810-98, author of the land grant bill of 1861. American and foreign scientists and Department personnel are the subjects of many of the photographic prints, 1886-1937, that were collected by Erwin F. Smith, the head of the Laboratory of Plant Pathology, Bureau of Plant Industry (**ES**). Also included are a few photographs of Department buildings and experimental farms.

## TABLE - 16.25
## General Correspondence, Office of the Secretary of Agriculture
## Select List of Subject Headings and Dates Covering the Period, 1906-13

This list is far from exhaustive. About 100 additional subject headings were used to file correspondence during the 1906-13 period.

| Subject | Dates |
|---|---|
| Agriculture | 1907-9 |
| Agriculture Department: | |
| Officers and employees | 1907-35 |
| Work | 1907-36 |
| Alcohol | 1906-39 |
| Analysis | 1906-38 |
| Animal Breeding | 1906-35 |
| Animals: | |
| Buffalo | 1908-9 |
| Cattle | 1906-25 |
| Hogs | 1906-23 |
| Horses and mules | 1906-23 |
| Sheep | 1906-23 |
| Art - architecture | 1908-9 |
| Articles | 1907-39 |
| Associations | 1906-39 |
| Bacteria | 1906-37 |
| Bamboo | 1911-12 |
| Beet sugar | 1906-7 |
| Beverages | 1907-32 |
| Birds | 1906-39 |
| Blackleg vaccine | 1911-22 |
| Boys' and girls' clubs | 1911-39 |
| Bridges | 1910-13 |
| Brine | 1907-8 |
| Broom corn - brooms | 1907-15 |
| Butter | 1906-39 |
| Cane - sugar cane, walking canes, etc. | 1911-14 |
| Canneries - evaporators | 1911-16 |
| Census | 1906-21 |
| Catsup - pickles | 1909-10 |

| Subject | Date |
|---|---|
| Cheese | 1907-39 |
| Chewing gum | 1909-10 |
| Chocolate | 1909-17 |
| Claims | 1906-30 |
| Climate - weather conditions | 1909-31 |
| Clover | 1910-18 |
| Coffee | 1906-39 |
| Copper sulphate | 1911-14 |
| Corn syrup | 1907-13 |
| Corporations | 1908-13 |
| Cotton | 1906-39 |
| Country life | 1908-9 |
| Crops | 1906-39 |
| Dairy - dairying | 1907-39 |
| Dams | 1911-14 |
| Decisions | 1906-7 |
| Deed - titles | 1906-26 |
| Dips | 1911-35 |
| Diseases: | |
| Animal | 1906-35 |
| Human | 1906-35 |
| Plant | 1906-35 |
| Distilleries | 1907-12 |
| Drought | 1911-13 |
| Earthquakes | 1906-7 |
| Education - schools | 1906-35 |
| Eggs | 1906-35 |
| Electricity | 1908-39 |
| Elevators | 1910-39 |
| Entry | 1907-12 |
| Erosion | 1910-11 |
| Exhibits - expositions | 1906-39 |
| Experiment stations | 1906-7 |
| Exposition | 1908-9 |

| Subject | Date |
|---|---|
| Farmers Institutes | 1906-7 |
| Farms - farmers - farming | 1906-39 |
| Feathers | 1906-39 |
| Feed | 1906-39 |
| Fences - gates | 1906-39 |
| Fertilizer | 1909-39 |
| Fire | 1906-39 |
| Fish Commission | 1906-7 |
| Flax | 1906-9; 1911-13 |
| Floods | 1911-39 |
| Flour | 1906-39 |
| Food | 1906-39 |
| Food laws | 1906-35 |
| Forest Reserves | 1906-7 |
| Forest Service | 1906-7 |
| Forestry | 1906-39 |
| Fruit | 1906-39 |
| Fruit - grapes | 1906-8 |
| Game - game preserves | 1906-7 |
| Game laws | 1906-35 |
| Gas | 1908-11 |
| Gasoline | 1906-7 |
| Grain | 1907-39 |
| corn | 1907-23 |
| oats | 1908-10 |
| rice | 1907-23 |
| wheat | 1907-23 |
| Grass | 1906-39 |
| Grazing | 1906-39 |
| Hay | 1908-39 |
| Hemp | 1910-22 |
| Homestead entry | 1906-35 |
| Hops | 1908-22 |
| Horseshoeing | 1908-9 |

| Subject | Date |
|---|---|
| Ice cream cones | 1910-11 |
| Immigration - colonization | 1908-35 |
| Indian reservations | 1906-7 |
| Indians | 1906-39 |
| Insecticides | 1910-39 |
| Insects | 1906-39 |
| Bees | 1906-11 |
| Boll Weevil | 1909-23 |
| Locusts | 1906-7 |
| Moths | 1906-7 |
| Inspection - inspectors | 1906-7 |
| Irrigation - drainage | 1906-36 |
| Jute | 1906-11 |
| Labels - trademarks | 1906-39 |
| Labor - laborers | 1906-9 |
| Lands | 1906-35 |
| Lard - tallow | 1907-22 |
| Law - laws | 1906-39 |
| Lawsuits | 1906-39 |
| Law - Twenty-eight Hour | 1908-35 |
| Leases | 1911-39 |
| Leather | 1911-39 |
| Lightning - lightning rods | 1911-18 |
| Macaroni | 1908-17 |
| Machinery | 1906-39 |
| Maps | 1906-39 |
| Meat - meat inspection | 1906-39 |
| Meetings (conferences, etc., by name) | 1906-39 |
| Memorials (monuments) | 1910-14 |
| Meteorological work | 1908-9 |
| Mineral entry | 1906-17 |
| Minerals | 1908-9 |
| Minerals - coal | 1906-8 |

| Subject | Date |
|---|---|
| Mining companies | 1907-8 |
| Monuments | 1906-18 |
| National forests | 1907-39 |
| National parks | 1908-37 |
| Negroes | 1909-10 |
| Nurseries - nursery stock | 1906-39 |
| Nuts | 1906-39 |
| Oil | 1906-39 |
| Oleomargarine | 1907-39 |
| Opinions - decisions | 1906-39 |
| Orchards | 1910-27 |
| Orders (Executive and others) | 1906-17 |
| Packing houses and slaughter houses | 1906-28 |
| Paintings | 1906-7 |
| Permits | 1906-39 |
| Petitions | 1907-39 |
| Phosphates | 1910-19 |
| Plant breeding | 1906-7 |
| Poultry | 1907-9 |
| Publications | 1907-39 |
| Publications - outside | 1906-39 |
| Quarantine | 1906-39 |
| Railroads | 1909-10 |
| Rainfall | 1906-9 |
| Range | 1908-13 |
| Reforestation | 1907-8 |
| Regulations | 1907-8 |
| Reports | 1906-39 |

| Subject | Date |
|---|---|
| Research work | 1910-11 |
| Reservations | 1909-39 |
| Reservoirs | 1907-8; 1911-12 |
| Rivers - lakes | 1910-39 |
| Roads | 1909-39 |
| Salt | 1909-10 |
| Silk - silkworms | 1907-28 |
| Skins | 1906-12 |
| Smelter fumes | 1910-39 |
| Smoke | 1911-18 |
| Soap | 1907-13 |
| Specimens | 1906-12 |
| Stations - laboratories | 1907-39 |
| Statistics | 1906-39 |
| Sugar | 1907-39 |
| Sumac | 1906-7; 1910-11 |
| Surveys | 1906-39 |
| Tariff | 1906-35 |
| Tick eradication | 1911-38 |
| Timber | 1906-35 |
| Trees | 1906-39 |
| Trespass | 1906-7; 1911-39 |
| Turpentine | 1903-14 |
| Vegetables | 1906-39 |
| Vegetables - potatoes | 1906-7 |
| Vinegar | 1907-14 |
| Volcanoes | 1908-9 |

| Subject | Date |
|---|---|
| Water power | 1909-35 |
| Wire | 1909-10 |
| Wood preservation | 1910-13 |
| Wool | 1910-39 |

# Record Group 17

## RECORDS OF THE BUREAU OF ANIMAL INDUSTRY

*There are west of the Mississippi River 23,077,611 cattle, an increase since 1880 of 7,537,132, or over 1,750,000 head per annum. Nothing more is needed to demonstrate the vastness of this enterprise. The business of raising cattle is in the hands of two great classes,* i.e., *the men who raise cattle on and sell them from the range, and the farmers who each year turn from one to five hundred head of beeves to market. The interests of these two great classes are closely united, and they are of mutual benefit to each other. The range man is able in the fall of the year to turn over to the farmer such of his herd as are not at that time fit for market, but would make fine beeves by the next spring if properly fed during the winter. The range man has neither the feed nor the facilities for this part of the business, and finds it more profitable to sell a steer at two years past than to hold him till three years past. On the other hand, the farmer of our Western States and Territories will seek in vain for a method of marketing his corn, straw, and hay that will prove as profitable as the one which sends them to market in the shape of corn-fed beef.*

*J.H. Fullinwider, "Cattle Interests of the West,"* First Annual Report of the Bureau of Animal Industry for the Year 1884, *p. 278.*

### INTRODUCTION

**17.1** The Bureau of Animal Industry was established in the Department of Agriculture by an act of Congress approved May 29, 1884, to prevent the exportation of diseased cattle and to eradicate contagious diseases among domestic animals. Its establishment was prompted by demands from the public for greater participation by the Federal Government in the study and eradication of animal diseases in order to protect and develop the American livestock and meat industries.

**17.2** Congress had earlier attempted to prevent the spread of foreign diseases among cattle in the United States by enacting laws prohibiting the importation of cattle (1865) and hides (1866). The appearance of Texas fever, however, caused increased concern about animal diseases; in 1868 the Commissioner of Agriculture appointed a veterinarian to study this disease and in 1869 recommended the establishment of a division of veterinary surgery. By 1877 the Commissioner found it necessary to appoint agents in several States to report on the presence of diseases in domestic animals; in the following year, a Government veterinarian was stationed at the stockyards in Chicago to examine the cattle received there.

**17.3** By 1881 several European countries were placing restrictions on the importation of American livestock and meat, which had frequently been found to be infected. Congress reacted by directing the Secretary of the Treasury to secure information concerning cattle to be exported and to certify that such cattle were found to be free from pleuropneumonia. To accomplish these tasks, the Secretary appointed a three-man Treasury Cattle Commission.

**17.4** Such measures failed to quell public agitation for a national veterinary bureau. In 1883 the Commissioner of Agriculture established a research unit known as the Veterinary Division, but the public demand for a national agency remained unabated until the Bureau of Animal Industry was established in 1884.

**17.5** The Bureau of Animal Industry was assigned functions previously performed by the Treasury Cattle Commission and the Veterinary Division of the Department of Agriculture. Its responsibilities were both investigative and regulatory in nature. Its scientific investigations were concerned with the cause, prevention, and treatment of diseases of domestic animals and included experiments in breeding, feeding, and management of livestock and poultry. Important in this connection was research that helped to eradicate or sharply decrease such diseases as cattle fever, hog cholera, anthrax, bovine tuberculosis, and sheep scabies. Through its investigations in animal husbandry the Bureau produced much information concerning the breeding and feeding of animals and developed important methods of improving the quality and usefulness of animal products.

**17.6** The Bureau was responsible for the enforcement of several important statutes designed to eradicate or control animal diseases and protect public health against the distribution of unwholesome meat and meat food products. Among these statutes were

the Twenty-Eight-Hour Law, the Meat Inspection Act, the Diseased Animal Transportation Acts, and the Animal Quarantine Acts. The Twenty-Eight-Hour Law of 1873, amended in 1906, prohibited railroads or other common carriers from confining animals shipped across State lines for longer than 28 hours without unloading them into properly equipped pens for feed, water, and rest for a period of 5 hours, unless prevented by accidental or unavoidable causes. The Meat Inspection Act of 1891, also amended in 1906, provided for Federal meat inspection at slaughtering and processing establishments engaged in interstate and foreign commerce, supervision of the interstate transportation of meats, and inspection of imported meats. The Diseased Animal Transportation Acts of 1903 and 1928 authorized the Secretary of Agriculture to regulate the exportation and interstate transportation of infected livestock and poultry, and the Animal Quarantine Acts of 1905 and 1928 empowered the Secretary to establish and maintain quarantine districts where diseases of livestock or poultry existed.

**17.7** In 1891, by order of the Secretary of Agriculture, the work of the Bureau of Animal Industry was organized into four divisions: the Inspection Division, the Division of Animal Pathology, the Division of Field Investigations and Miscellaneous Work, and the Division of Quarantine. As the work of the Bureau increased and became more specialized, the Bureau was reorganized several times. By 1913 the following Divisions had been established: Dairy (1895), Biochemic (1896), Zoological (1901), Animal Husbandry (1910), Meat Inspection (1912), and Field Inspection (1912). Many activities suggested by the names of these divisions had been carried on either by the Bureau as a whole or by some other units before the divisions in question were organized. The work of the divisions was facilitated by cooperation with State officials, other Federal bureaus, and stockmen and by the Bureau's numerous field stations, experimental farms, and laboratories. By 1897 employees of the Bureau were stationed in Arizona, California, Iowa, Kansas, Louisiana, Minnesota, Missouri, Nebraska, Oregon, and Texas; by 1909, in California, Colorado, Iowa, Kansas, Louisiana, Minnesota, Missouri, Nebraska, New Mexico, North Dakota, Oklahoma, Oregon, Texas, Utah, and Washington. Determination of general policies and supervision of activities were vested in the Chief of the Bureau.

**17.8** Reorganization of the work of the Department of Agriculture from time to time affected the organization and jurisdictional control of the Bureau of Animal Industry. In 1924, for example, the Dairy Division became the independent Bureau of Dairying, later designated the Bureau of Dairy Industry. The Bureau of Animal Industry, itself, retained its independent status until it was placed under the general supervision of the Agricultural Research Administration, which was created in 1942. In 1953 both the Agricultural Research Administration and the Bureau of Animal Industry were abolished and their functions transferred to a new organization, the Agricultural Research Service.

**17.9** Most of the records discussed in this chapter are part of the records of the central office of the Bureau of Animal Industry in Washington, DC. Included are a few records created by the War Department concerning real property transferred to the Bureau for use as experiment stations. Also discussed in this chapter are related central office photographic records and some field office correspondence that are part of Record Group 136, Records of the Agricultural Marketing Service. Because so few of the records in Record Group 136 are relevant to this guide, those records that are pertinent are described here (17.19 and 17.25) and in the chapter for Record Group 54, Records of the Bureau of Plant Industry, Soils, and Agricultural Engineering, rather than in a separate chapter. Additional records relating to the work of the Bureau are in other record groups in the National Archives. Record Group 16, Records of the Office of the Secretary of Agriculture, includes correspondence concerning the general supervision of the Bureau's activities, 1884-1950, particularly the copies of letters prepared by the Bureau for the signature of the Secretary, 1894-1929. These letters are reproduced as part of National Archives Microfilm Publication M440, *Letters Sent by the Secretary of Agriculture, 1893-1929* (rolls 176-233). Also in RG 16 are case files of the Solicitor's Office dealing with the enforcement of the Animal Quarantine Acts, 1909-40; the Meat Inspection Act, 1908-42; and the Twenty-Eight-Hour Law, 1907-42. Correspondence and reports of the Bureau's Dairy Division, 1907-24, are in Record Group 152, Records of the Bureau of Dairy Industry.

**17.10** Records of the Treasury Cattle Commission and the short-lived Veterinary Division of the Agriculture Department do not appear to have been preserved. Reports produced by the Commission, however, are published in the Congressional Serial Set. Some of those reports, as well as record copies

of the publications of the Bureau of Animal Industry, are in Record Group 287, Publications of the U.S. Government.

**17.11** Most of the textual records constituting RG 17 are described in the 1976 revision of Harold T. Pinkett's *Preliminary Inventory of the Records of the Bureau of Animal Industry* (PI 106), found in the National Archives microfiche edition of preliminary inventories. Included in the microfiche edition are descriptions of records accessioned after the preliminary inventory appeared, such as the correspondence and related records, 1914-53, from virus serum control stations located in Kansas City, KS, and West Plains, MO, now among the holdings of the National Archives--Central Plains Region, Kansas City, MO, and the diaries and correspondence, 1917-32, of the U.S. Poultry Experiment Station, Glendale, AZ, now in the custody of the National Archives--Pacific Southwest Region, Laguna Niquel, CA.

**17.12 Editorial Note:** Many records in Record Group 17, including those of the field stations mentioned above, originated after 1912, and they are not described here. Unless otherwise noted, those series consisting of records that originated prior to 1913 but extending beyond that date are described in their entirety; no attempt has been made to determine what part of such series relates to the pre-1913 period. The photographic records for both Record Group 17 and Record Group 136, which are maintained apart from the textual records, are identified by alphabetic collection designators instead of series titles; the designators are shown in parentheses. The few cartographic records that are allocated to both record groups fall outside the chronological scope of this guide.

## Correspondence Files

**17.13** The records of the central office of the Bureau of Animal Industry in Washington, DC, were usually maintained by a central filing unit. Most of the correspondence handled by the unit was filed in one large series consisting of incoming letters and carbon copies of replies filed in chronological segments (17.15-17.16). Press copies of outgoing letters were also made, and those that are extant are described below (17.17). Many of the press copies duplicate carbon copies found in the central correspondence files.

**17.14** The divisions and offices of the Bureau were assigned alphabetical designations, which, together with pertinent file classifications, appear on copies of letters sent. These designations, which show the administrative origin of the letters, are as follows:

A. Chief of Bureau
B. Assistant Chief of Bureau
C. Chief Clerk of Bureau
D. Animal Husbandry Division
E. Biochemic Division
G. Dairy Division
H. Appointment Section
L. Library
M. Pathological Division
N. Field Inspection Division (beginning in 1917)
O. Zoological Division
P. Office of Property and Supplies
R. Editorial Office
T. Office of Accounts
U. Quarantine Division
V. Division of Virus-Serum Control
W. Tuberculosis Eradication Division
Y. Meat Inspection Division
YY. Field Inspection Division (to 1917)

**17.15** The **central correspondence, 1895-1906** (2 ft.), relates to all phases of the work of the Bureau of Animal Industry, although most activities of the Division of Animal Husbandry after 1900 are covered by a separately maintained correspondence file (17.18). The correspondence is arranged numerically, each number standing for a specific subject. The subjects covered include investigations, experiments, regulatory activities, and other important functions or interests of the Bureau that produced a considerable amount of correspondence. Typical subject headings and their corresponding dates and file numbers are given in the accompanying Table - 17.15. A complete list of the subjects dealt with in this segment of the central correspondence is available in the National Archives. Files for many of the numbers are missing, presumably because the Bureau disposed of the records.

**17.16 Central correspondence, 1907-13** (21 ft.), pertains to all activities of the Bureau but does not fully cover the work of the Division of Animal Husbandry (see 17.18) or the Dairy Division. The portion of this file relating to the Dairy Division was transferred to the Bureau of Dairying, which was established in 1924. The remainder of the file covers

the same subjects or subjects similar to those of the earlier correspondence segment described above. The accompanying Table - 17.16 lists some typical subject headings, their corresponding dates, and file numbers. A complete list of the subjects covered by the file is also available to researchers for use in the National Archives.

**17.17** Three series of press copies of outgoing letters are relevant. **Letters sent to the State Department, 1892-97** (1 vol., 1 in.), by the Secretary of Agriculture, which are arranged chronologically and indexed by subject, concern the importation and exportation of animals and animal products. Efforts of the Bureau to suppress an extensive outbreak of the foot-and-mouth disease in American cattle are recorded in **letters sent relating to the eradication of the foot-and-mouth disease, 1912-18** (25 vols., 3 ft.), which are arranged chronologically and indexed by name of correspondent. Various other activities of the Bureau are documented by an extensive series of **"Miscellaneous" letters sent, 1911-18** (142 vols., 17 ft.), arranged chronologically and indexed by subject. These press volumes include copies of letters of divisional officials.

**17.18** The **general correspondence of the Division of Animal Husbandry, 1901-14** (22 ft.), pertains to investigations or experiments in animal and poultry breeding, nutrition, and management, and the processing and utilization of meat products. Much of the correspondence is with State experiment stations and with organizations such as breeders' associations and clubs. The correspondence is arranged in three chronological segments, based on fiscal years, for the periods 1901 to 1905, 1905 to 1907, and 1907 to 1914. The records making up the first and second segments are arranged numerically, with each number standing for a specific subject; the records in the third segment are arranged by year and thereunder by number. One of the files for the 1901-5 period concerns buffalo and cattle on the Goodnight Ranch in Texas (file 28), while range horses are the topic of a file (106) for the 1905-7 period. Files for all three periods (98, 4, 4) relate to the carriage-horse breeding work still being conducted at the Colorado Experiment Station in 1912, four years after Henry Ford had begun production of his Model T automobile. Table - 17.18 lists some of the subjects that are covered in the first two segments of the correspondence. A complete list of the subjects covered by all three segments of the correspondence is available in the National Archives.

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**Related Records in Record Group 136, Records of the Agricultural Marketing Service.**

**17.19** From 1921 to 1927, the Bureau of Animal Industry, through the Packers and Stockyards Administration, was responsible for administering the Packers and Stockyards Act of 1921, as amended, which provided for regulation in interstate commerce of the stockyards and meat packing industry. The field office records of the Packers and Stockyards Administration held by the National Archives--Central Plains Region, in Kansas City, MO, include a small quantity of **general correspondence, 1887-1943** (5 in.), relating primarily to personnel matters at the stockyard in St. Joseph, MO, and to policy, weights and measures, and personnel matters at the stockyard in Wichita, KS. The records of the Agricultural Marketing Service and its predecessors are described in "Preliminary Inventory of the Records of the Agricultural Marketing Service" (NC-118), compiled by Virgil E. Baugh, and its supplement in the National Archives microfiche edition of preliminary inventories.

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## Other Records

**17.20** Included in this group are administrative and procedural issuances and some records that once may have been maintained separately by division but were later placed in the custody of the central filing unit. A series of bound and unbound **circular letters, 1906-49** (11 vols. and unbound files, 5 ft.), consists of mimeograph and press copies of instructions sent to inspectors concerning their regulatory activities. Although the letters in the bound segment of the series, through 1918, are arranged in chronological order within each volume, the time periods covered by the volumes overlap to some extent. Additional procedural issuances are found in the bound **orders, regulations, instructions, and other records, 1897-1917** (13 vols., 4 ft.), relating to the Bureau's work in preventing disease in animals and the contamination of animal products, by establishing standards and maintaining proper inspection, transportation, health, and quarantine practices. Subjects include enforcement of quarantine regulations for scabies and foot and mouth disease, livestock inspection, approval of

products for animal disease prevention, and violations of regulations concerning the transportation and slaughter of animals, including the Twenty-Eight-Hour Law.

**17.21** Information about Bureau activities can be found in several series. **Project statements, 1905-13** (1 vol., 1 in.), arranged chronologically and indexed by subject, describe the history, aims, methods, and results of research projects of the Bureau. **Reports and correspondence, 1888-98** (1 vol., 1 in.), include copies of annual and special reports describing the work of the Bureau and press copies of correspondence between the Department of Agriculture and the Department of State concerning restrictions in European countries on the importation of American cattle. Newspaper **clippings relating to the Bureau's work in disease prevention, 1897-1917** (1 vol., 3 in.), document outbreaks of animal diseases and the Bureau's efforts to contain them and to prevent further epidemics through educational programs, inspections, and research. The clippings are mounted in a volume labeled "Invoices." Also available is a series called **"Animal Industry Reports," 1905-38** (10 vols., 10 in.), which includes copies of the Bureau's published *Annual Reports*, 1905-11 (7 vols.), and an incomplete series of periodic published **service and regulatory announcements, 1907-40** (10 vols., 10 in.), dealing with organizational and personnel changes, changes in the abattoir directory through additions or eliminations of meat inspection stations, and instructions concerning meat inspection, approved dips for sheep and cattle, sheep breeding experiments, and poultry investigations.

**17.22** Personnel and real property documents round out the records for the pre-1913 period. The **personnel records, 1891-1914** (2 in.), consist of correspondence and other records, arranged alphabetically by name of employee, relating to the service of the following: Henry E. Alvord, Robert G. Blaine, James Law, Daniel E. Salmon, Charles W. Stiles, S.K. Suzuki, and Charles Thom. Records pertaining to the acquisition of land for the field work of the Bureau constitute the series of **deeds and other title records, 1874-1950** (6 ft.), arranged by name of locality. Included are records relating to land acquired for the United States Sheep Experiment Station at Dubois, ID, and the establishment of some military posts such as Fort Keogh Military Reservation, MT, and Fort Reno, OK, which became sites of Bureau experimental work. Some of the records relating to land that was acquired by the Bureau have been filed with those of the Secretary's Office in Record Group 16, Records of the Office of the Secretary of Agriculture.

PHOTOGRAPHIC RECORDS

**17.23** Photographic prints and some negatives, 1864-1943 **(N, HD, HDA, HM)**, show breeds of dogs and various breeds of horses, zebras, and mules and other equine crossbreeds; views of horse pens in Montana and Wyoming; and portraits of Bureau officials and other personnel. Photographic prints, 1905-30 **(P)**, show breeds of poultry and other birds, exhibits, and views of Bureau facilities at Glendale, AZ. Four chromolithograph posters, ca. 1910 **(AP)**, advertise horses for sale, presumably at an unidentified auction. Each poster consists of a drawing by Thackeray Edwards surrounded by information concerning the horse or horses to be sold. The posters were laminated onto backboards before they were accessioned by the National Archives.

**17.24** A 6- by 8-inch album entitled "United States Government Inspection at the Packing Establishments, South Omaha, U.S.A," 1910 **(PE)**, contains photographs documenting various stages of meat production at Swift and Co. and at the Cudahy Packing Co. Shown are employees inspecting carcasses, packing chipped beef, branding smoked hams, manufacturing sausages, and supervising the labeling of beef extract. Accompanying the album are photographs of meat packing inspectors for the South Omaha, NE, Office of the Bureau of Animal Industry, 1910 **(PI)**. In these group portraits the inspectors are photographed in front of what is presumably the Bureau's Omaha office. Persons in the photos are identified by their surnames. The photographs in the album and the group portraits were taken by commercial photographer Louis R. Bostwick.

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**Photographic Records in Record Group 136**

**17.25** Photographs, 1909-19 **(M)**, consisting of some 1,285 images maintained apart from the textual records, document cooperative studies of the egg and poultry industry undertaken by the Bureau of Animal Industry, the Bureau of Chemistry, and the Bureau of Markets. The photographs show the preparation of chickens, turkeys, and eggs for market.

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## TABLE - 17.15
## Select List of Subjects, Dates, and Files Numbers in the Central Correspondence, 1895-1906

The subjects listed below are grouped under primary subject headings adopted in 1913 in the file classification system of the Bureau.

| | | |
|---|---|---|
| General and Administrative: | | |
| "Beef trust," published articles on | 1905 | 3834 |
| Cattle straying across Canadian line | 1897 | 4131 |
| Force (Bureau inspectors), assaults on | 1904-6 | 7614 |
| South Omaha, NE, irregularities in administration | 1904 | 2919 |
| Meat Inspection: | | |
| Condemned carcasses, disposition of | 1900, 1904-6 | 320 |
| Cooperation with local inspectors | 1904-6 | 4459 |
| Dold Packing Company, Kansas City, MO, inspection work at | 1897-98 | 2478, 5589 |
| Kansas City, MO, inspection of cattle | 1897 | 3183 |
| Kosher slaughtering on Sundays, after hours, holidays, etc. | 1906 | 7464 |
| Labels and stamps | 1905-6 | 5367 |
| Meat branding devices | 1905-6 | 4576 |
| Microscopic inspection | 1897 | 4046 |
| Municipal inspection | 1904-6 | 4459 |
| Navy and War Departments, inspection of meat for | 1899, 1901-6 | 43 |
| Polk Stockyards, Ft. Worth, TX, report on | 1898-1900 | 4818 |
| Regulations, meat inspection (B.A.I. orders) | 1899, 1904-6 | 4126 |
| Ruddy Brothers vs. William S. Devoe (B.A.I. inspector) | 1897 | 3442 |
| Slaughtering at official establishments without presence of Bureau employees, Seattle, WA | 1903 | 2454 |
| Stockyards for non-infected cattle, Texarkana, AR | 1904 | 5192 |
| Stockyards in the West, report of R.P. Steddom on | 1905 | 7650 |
| Stockyards, Laredo, TX | 1906 | 7652 |

| | | |
|---|---|---|
| Animal Diseases: | | |
| Cures for miscellaneous diseases of cattle | 1906 | 4778 |
| Dips | 1905-6 | 7622 |
| Sheep dipping | 1906-7 | 2178 |
| Claims regarding sheep dipping, Kansas City, MO | 1896-97 | 3390 |
| Hog cholera, cures for | 1905 | 4610 |
| Hog cholera, investigations | 1903, 1905 | 3290, 6680 |
| Hogs, tuberculosis in | 1905-6 | 3290, 6680 |
| Horses, diseases in | 1906 | 4995, 7600 |
| Scabies in cattle | 1902-6 | 4943 |
| Scabies in horses | 1905 | 7600 |
| Scabies in sheep | 1898, 1900-1906 | 2160, 2178, 5290 |
| Sheep, diseases in (*see* scabies in sheep) | | |
| Texas fever quarantine: | | |
| Arizona Territory | 1906 | 5955 |
| Indian Territory | 1904-6 | 5812 |
| Missouri | 1906 | 5836 |
| Oklahoma | 1905 | 5666 |
| Texas | 1902-4 | 5745 |
| Washington | 1905-6 | 3082 |
| Wyoming | 1905 | 7079 |
| Ticks | 1904-5 | 5542, 6650 |
| Ticks and Texas fever in cattle | 1905-6 | 5340 |
| Tuberculin | 1898-99, 1905 | 5622, 6745 |
| Tuberculosis | 1902-6 | 3881, 6166 |
| Animal Husbandry: | | |
| Cooperative work with State experiment stations | 1902-6 | 5939 |
| Exportation and Importation of Animals: | | |
| Cattle, importation of | 1904, 1906 | 6729 |
| Vessels, cattle attendants on | 1897, 1905-6 | 3544 |
| Vessels, losses of cattle on | 1905 | 6358 |

## TABLE - 17.16
## Select List of Subjects, Dates, and Files Numbers in the Central Correspondence, 1907-13

The subjects listed below are grouped under primary subject headings adopted in 1913 in the file classification system of the Bureau.

| | | |
|---|---|---|
| General and Administrative: | | |
| Assaults on Bureau employees | 1907-13 | 231 |
| Cooperation with State agricultural experiment stations | 1907-13 | 30 |
| Exhibits (animal) at: | | |
| fairs, expositions, livestock shows | 1908, 1911-12 | 397 |
| expositions | 1908, 1910-13 | 351 |
| Livestock, movement onto forest reserves and Indian reservations | 1907-12 | 367 |
| Meetings | 1908-13 | 34 |
| Regulations and orders of the Secretary of Agriculture | 1907, 1910-13 | 383 |
| South Omaha, NE, use of force | 1909, 1912 | 63 |
| Meat Inspection: | | |
| Abattoirs, plans and construction of | 1910-11 | 458 |
| Army and Navy, inspection for | 1907-13 | 192 |
| Chemical examination | 1907-12 | 17, 75 |
| Federal ante-mortem inspection | 1907-13 | 27, 48, 50, 52, 384, 661 |
| Inspections for export | 1907-13 | 80, 132 |
| Preparation of meat and meat-food products | 1907-13 | 59, 174, 366, 448 |
| State inspection regulations: | | |
| California | 1911-12 | 590 |
| Colorado | 1911 | 542 |
| Idaho | 1909 | 550 |
| Kansas | 1910 | 580 |
| Louisiana | 1912 | 588 |
| Missouri | 1910-11 | 552 |
| Montana | 1912 | 419 |
| Nebraska | 1909 | 537 |
| North Dakota | 1911 | 529 |
| Oklahoma | 1912 | 645 |
| South Dakota | 1912 | 541 |
| Utah | 1911 | 568 |
| Wyoming | 1909 | 477 |
| Transportation of meat | 1907-13 | 41, 45 |

| | | |
|---|---|---|
| Animal Diseases: | | |
| Anthrax | 1910-12 | 179 |
| Bovine animals | 1909-12 | 47, 51 |
| Canine animals | 1910-12 | 164, 190 |
| Dips | 1907-12 | 149 |
| Equine animals | 1907-12 | 71 |
| Hog cholera | 1908-12 | 88 |
| Mange in cattle: | | |
| Colorado | 1908,1910,1912 | 168 |
| Iowa | 1910 | 409 |
| Kansas | 1907-8, 1911-12 | 89 |
| Montana | 1907,1910,1912 | 355 |
| Nebraska | 1907-12 | 255 |
| New Mexico | 1907-8, 1911 | 106 |
| Oklahoma | 1911 | 393 |
| Oregon | 1911-12 | 652 |
| South Dakota | 1912 | 359 |
| Mange in sheep: | | |
| Colorado | 1907-8, 1912 | 376 |
| Idaho | 1907-8 | 353 |
| Nevada | 1907-8, 1911-12 | 362 |
| New Mexico | 1907-8, 1911-12 | 339 |
| Utah | 1907, 1910-12 | 361 |
| Wyoming | 1907-8, 1911-12 | 373 |
| Ovine animals | 1909-12 | 2, 88 |
| Porcine animals | 1907-12 | 38 |
| Poultry | 1910-12 | 123 |
| Serums, vaccines, etc., preparation of | 1910-11, 1912 | 283 |
| Scabies | 1907-12 | 32, 120, 513 |
| Scabies, Arizona sheep | 1907,1910,1912 | 105 |
| Texas fever: | 1907-12 | 19, 100 |
| Arizona | 1908, 1910 | 340 |
| Kansas | 1910 | 452 |
| Louisiana | 1907-8, 1910-12 | 150 |
| Missouri | 1908-10, 1912 | 276 |
| Texas | 1907-12 | 122 |
| Tuberculosis | 1907-12 | 107 |
| Twenty-Eight-Hour Law, violations of | 1907-8, 1910-12 | 158 |
| Exportation and Importation of Animals: | | |
| Hides, hoofs, horns, etc., exportation of | 1908 | 189 |

## TABLE - 17.18
### Select List of File Numbers and Subjects in General Correspondence, Division of Animal Husbandry, 1901-14

1901-September 30, 1905 (Nos. 1-286, not all numbers used):

14. Cattle, contagious abortion, study of Iowa Experiment Station
28. Goodnight Ranch, Goodnight, TX: Buffalo and cattle
43. Hogs, miscellaneous
45. Horses, miscellaneous
50. Hogs, experiment at South Dakota Experiment Station
56. Investigation of the American Percheron Horse Breeders' and Importers Association
63. Cattle feeding, cooperative experiment with Colorado Experiment Station
69. State Livestock Breeders' Association
84. Cattle, rice feeding, cooperative experiment with Texas Experiment Station
89. Sheep breeding work, cooperative experiment with Colorado Experiment Station
98. Horses, breeding carriage horses, cooperative experiment with Colorado Experiment Station
99. Horse breeding, placing Thomas W. Lawson stallions in Iowa

October 1905-June 30, 1907 (Nos. 1-372, not all numbers used):

4. Carriage horse breeding, Colorado Experiment Station
11. Breeding milking shorthorns, Minnesota Experiment Station
12. Range sheep breeding, Wyoming Experiment Station
16. Breeding gray draft horses, Iowa Experiment Station
19. Poultry industry, miscellaneous
100. Horses, range
357. Stock shows, etc., Iowa State Fair
358. Texas quarter or steeldust horses

# Record Group 27

## RECORDS OF THE WEATHER BUREAU

*The value of the work of the Weather Bureau to the country depends largely upon its ability to distribute promptly the information collected at central points from its system of telegraph stations. The daily weather forecasts issued by the Bureau have always been recognized as of sufficient importance to be telegraphed by the Associated Press as items of news, and they are therefore distributed without expense to the service to the centers of population, and have appeared regularly in the daily journals of the country. Many efforts have been made to reach the more thinly settled portions of the country, and with the transfer of the Weather Bureau to the Agricultural Department renewed efforts are being made to extend the weather forecasts to agricultural communities. The most thorough distribution of the forecasts possible would be by telegraph daily to every telegraph office in the country, where means should be provided for the display of reports in bulletin form. Such a system can not at present be utilized owing to the small appropriations made for telegraph purposes, although it has been strongly urged by agricultural organizations throughout the country, and Congress has been petitioned repeatedly for appropriations to bear the expense attending such telegraph service. Those most interested in agriculture will not be satisfied without additional appropriations for this feature of Weather Bureau work, and it will be in the interest of the general public, including all classes, if arrangements can be made which will place the daily weather bulletin at every telegraph office in the country.*

*REPORT OF THE CHIEF OF THE WEATHER BUREAU,*
Report of the Secretary of Agriculture, 1891,

### INTRODUCTION

**27.1** The Weather Bureau was established in the Department of Agriculture by an act of Congress, approved October 1, 1890, and given responsibility for the weather-related functions of a succession of Federal agencies that since 1814 had engaged in the collection, compilation, and interpretation of meteorological observations. In 1904 the authority of the Weather Bureau was expanded to include marine meteorological functions formerly performed by the Hydrographic Office of the Navy Department. The Weather Bureau continued as a component of the Department of Agriculture until 1940, when it was transferred to the Department of Commerce. In 1965 the Bureau was consolidated with the Coast and Geodetic Survey to form the Environmental Science Services Administration. When that Administration was abolished in 1970, the Bureau, renamed the National Weather Service, was incorporated into the newly formed National Oceanic and Atmospheric Administration, within the Department of Commerce.

**27.2** Figuring most prominently in the development of the Weather Bureau and the creation of the records described in this chapter were the early weather programs conducted by the Office of the Surgeon General of the Army, the Smithsonian Institution, the Office of the Chief Signal Officer of the Army, and the Coast Survey of the Treasury Department. These programs and the records they produced are discussed later. At this point, however, it is useful to comment on the meteorological observation programs undertaken by the General Land Office in 1817 and the Patent Office in 1841, which are not documented in Record Group 27.

**27.3** The General Land Office program was inaugurated by Commissioner Josiah Meigs, who instructed the Registers at the various land offices to report monthly on daily observations of the temperature, wind, and other weather phenomena taken in the morning, at 2 p.m., and in the evening. Although abstracts of their findings were printed from time to time in *Niles Weekly Register*, the short-lived program initiated by Meigs never received congressional recognition or adequate funding, and the records themselves have disappeared. The Patent Office conducted its meteorological investigations in connection with the work of its Agricultural Division. A cooperative agreement with the Smithsonian Institution, proposed in 1855, led to a joint, two-volume publication entitled "Results of Meteorological Observations made under the direction of the United States Patent Office and the Smithsonian Institution from the Year 1854 to 1859, Inclusive, being a report of the Commissioner of Patents made at the First Session of the Thirty-sixth Congress" (H. Ex. Doc. 55, 36th Cong., 1st sess. Serials 1052, 1053). Some records that relate to the Patent Office program and to the Office's early cooperation in climatological work with the Smithsonian Institution are found in Record

Group 16, Records of the Office of the Secretary of Agriculture.

**27.4** Several publications describe records of the Weather Bureau now held by the National Archives. Most detailed is Special List No. 1 (SL 1), *List of Climatological Records in the National Archives*, Lewis J. Darter, Jr., compiler, which was published in 1942 and reprinted in 1981. This publication includes a history of early weather service activities conducted by Federal agencies, a detailed analysis of the kinds of records created during those activities through 1911, and a geographical listing, by State or Territory and thereunder by site, of the various records available. An abbreviated version of the entries for each State or Territory appears under the title "Consolidated List of Climatological Records" in the Supplement to this chapter, which consists of lists of records for each State or Territory. Some of the records are available as National Archives Microfilm Publication T907, *Climatological Records of the Weather Bureau, 1819-1892* (564 rolls). Detailed listings of 25 additional series of records created largely by the Weather Bureau between 1893 and approximately 1940 are provided in *Preliminary Inventory of the Climatological and Hydrological Records of the Weather Bureau* (PI 38), compiled by Harold T. Pinkett, Helen T. Finneran, and Katherine H. Davidson and issued in 1952. About the same time that the inventory was published, the Weather Bureau withdrew from the National Archives all records needed for studies based on long-term observational data and transferred them to the newly established National Weather Records Center (now the National Climatic Data Center) in Asheville, NC. Included in the transfer were most of the records described in the inventory. Retained by the National Archives were records considered to have mainly historical value; relevant listings of those records, as given in the inventory, appear in the Supplement.

**27.5** The informal "Preliminary Inventory of Operational and Miscellaneous Meteorological Records of the Weather Bureau" (NC-3), compiled by Helen T. Finneran, was issued in 1965. Intended for staff use, this inventory is a comprehensive listing of the titles, footage, and arrangement of the other series constituting Record Group 27 at that time. Some records added since 1965 are described in a Preliminary Inventory in the National Archives microfiche edition of preliminary inventories, while others are listed here for the first time. Given the uneven nature of the descriptive materials available, many of the series descriptions given below are limited to titles, dates of coverage, footage, and arrangement statements when available.

**27.6** Records pertaining to climatological and meteorological activities may be found in other record groups in the National Archives. In addition to those records concerning the meteorological data collection program of the Patent Office mentioned previously (27.3), Record Group 16, Records of the Office of the Secretary of Agriculture, includes copies of letters prepared by the Weather Bureau for the signature of the Secretary, 1897-1929. These letters are reproduced as part of National Archives Microfilm Publication M440, *Letters Sent by the Secretary of Agriculture, 1893-1929* (rolls 557-563). Communications with the Weather Bureau and some information on the distribution of meteorological observation reports are found in Record Group 111, Records of the Office of the Chief Signal Officer. Record Group 112, Records of the Office of the Surgeon General, includes correspondence and instructions issued to post surgeons whose reports on weather phenomena are discussed in this chapter. Several related series of interest are among records of the Climatic and Physiographic Division in Record Group 114, Records of the Soil Conservation Service. These include summaries of excessive precipitation, 1860-1931; miscellaneous weather reports, 1875-1939; and erosion history and weather reports.

**27.7 Editorial Note**: Many records included in Record Group 27 originated after 1912, and they are not described here. Series consisting of records that originated prior to 1913 but extending beyond that date are described in their entirety; no attempt has been made to determine what part of such series relates to the pre-1913 period. Occasionally two titles are given for a record series; in such instances the title shown first reflects the contents of the records more accurately than the title in brackets, which often was taken from the spine of a volume or the heading on a form. Cartographic and photographic records usually are filed apart from the textual records. Photographic records are identified by alphabetic collection designators rather than by series titles; the designators are shown in parentheses. Unless otherwise noted, all of the records discussed below are held in the National Archives--College Park, MD. In the discussion that follows, the terms "meteorological" and "climatological" are often used interchangeably. Climatological records are mainly records of observations made by regular and coopera-

tive observers and by self-registering instruments describing "surface weather" conditions from the ground. Those meteorological records discussed below that have been used extensively in connection with studies of climate in the United States are usually designated as climatological records to distinguish them from other meteorological records relating primarily to atmospheric studies.

## WEATHER SERVICE ACTIVITIES OF THE WEATHER BUREAU AND ITS PREDECESSORS

### THE SURGEON GENERAL'S OFFICE

**27.8** The first nationwide weather system of the Federal Government was inaugurated in 1814, when hospital, post, and regimental surgeons were directed to keep diaries of the weather. Despite the fact that they were responsible for the care of the sick and wounded, the various Army surgeons faithfully performed the somewhat onerous task of taking the weather data. The abandonment of posts for long periods of time interfered with their observations, as did wars and Indian raids. Reports not infrequently contain notations like the following comment appearing in the September 1889 report from Chloride, AZ: "Owing to the threatened outbreak of the Wallapais, the rain gage was abandoned for several days and was only visited the second day after the rains." After the establishment of the weather service by the Signal Office in 1870, the meteorological work of the Surgeon General's Office was gradually discontinued. In June 1874 an arrangement was reached between the two Offices whereby the monthly reports of the surgeons were to be registered in the Surgeon General's Office and then turned over to the Signal Office. Thus, the post surgeons who submitted meteorological reports virtually became voluntary observers for the Signal Office. In fact, monthly reports received from the Army surgeons during the period 1860-93 are part of the series of reports submitted by voluntary observers for the Signal Office and the Weather Bureau. Because most of the Army surgeons were untrained in meteorology, the accuracy of the meteorological records created under the direction of the Surgeon General has been questioned, but in general, the reports are comparable in accuracy and superior in legibility and completeness to those submitted by the voluntary observers of the Smithsonian Institution and the Signal Office.

### THE SMITHSONIAN INSTITUTION

**27.9** The most important system for taking meteorological observations in the United States during the middle of the 19th century was that established in 1847 by the Smithsonian Institution under the leadership of Joseph Henry, the Institution's first Secretary. Henry was primarily concerned with a study of storms and with a scheme of telegraphic reports for their prediction, but he also contemplated exhaustive studies of U.S. climatology. Henry, together with James P. Espy, who was considered to be the "national meteorologist," developed a system for taking meteorological observations that was the forerunner of the weather system subsequently administered by the Signal Office and the Weather Bureau. The system was based on the voluntary cooperation of private observers, and by 1849 some 150 observers were reporting daily observations. With the cooperation of various telegraph companies, the Institution began to obtain telegraphic reports on weather in 1849, which led to the development of the first current weather maps in 1850. In order to expand the reporting system, Henry entered into a cooperative agreement with the Patent Office, which was collecting meteorological data in connection with its agricultural work. Because the Patent Office had stressed the influence of seasons and of the diversity of weather on crops, the agreement served to give the meteorological work of the Institution an agricultural emphasis, and the compiled weather data were extensively distributed among the nation's farmers by means of Patent Office publications. The arrangement with the Patent Office ended in 1860, but after the Department of Agriculture was established in 1862, a similar agreement was made with that Department that lasted until 1872.

**27.10** Contributions to the Smithsonian Institution's collection of meteorological data came from many sources. As the Institution's system of voluntary observers grew, all existing private and State weather services were gradually merged with it. By 1860 these services had ceased to function independently and had become part of the larger organization. Copies of reports produced under other meteorological systems and reports on extensive observations taken by various exploring parties, travelers, missionaries, and others were also received, and diaries and journals and other materials containing meteorological data were collected. The climatological work of the Smithsonian Institution declined in importance after

the establishment of the weather service of the Signal Office in 1870, and in 1873 its system of voluntary observers was transferred to that Office.

## The Signal Office and the Weather Service

**27.11** On February 4, 1870, Congress passed a joint resolution authorizing the Secretary of War to provide for the taking of meteorological observations at military stations and other points in the interior of the continent and for giving notice on the northern lakes and seaboard of the approach and force of storms. Placing the function in the War Department was to a certain extent a matter of economy, because most expenses, such as pay, subsistence, quarters, and travel, would be borne by the Army, leaving only telegraph tolls, instruments, stationery, salaries for civilian employees, and similar expenses to be funded separately. The duties associated with the function were assigned to the Chief Signal Officer, who, early in 1869, had presented to the Secretary of War a plan for utilizing the Signal Corps in preparing weather reports and posting storm signals.

**27.12** The weather service was organized in the Signal Office as the Division of Telegrams and Reports for the Benefit of Commerce; "and Agriculture" was added to the title in 1872. Since meteorological work soon became the major function of the Signal Office and its members, the divisional organization had no meaning in actuality, but the name was used on publications and forms. In fact, nomenclature was a problem in general, since the organization administered by the Chief Signal Officer was known as both the Signal Service and the Signal Corps. The organization itself used "Signal Service" almost exclusively during the early part of its history, but "Signal Corps" has now become the accepted term. The Office of the Chief Signal Officer was commonly designated as the Signal Office. Although members of the Corps performed most of the meteorological work, the weather service also used Signal Office civilian personnel, many of whom were trained meteorologists. The ranks of observers swelled when the Chief Signal Officer accepted the services of 383 observers from the Smithsonian Institution's system in 1873 and 123 observers from the Surgeon General's system in 1874.

**27.13** From February 1870 through June 1891, the Signal Office was virtually a weather bureau. Activities of the weather service were divided between work of a practical nature, such as the collection of meteorological data and the issuance of weather forecasts and storm warnings, and scientific research. Regular and special weather stations were maintained for the purpose of making and reporting meteorological observations, but reports were also received from voluntary observers, medical officers stationed at military posts, and the State weather services. Field stations administered by "observer-sergeants" telegraphed Washington at regular intervals about meteorological conditions and recorded their observations concerning these conditions in monthly reports. Station locations were selected based on the need to obtain data for storm warnings and weather forecasts rather than for the purpose of aiding the study of the climatology of the country. For example, when the Signal Office was studying the origins and characteristics of small but intense hurricanes moving up from Mexico, a large number of stations were eatablished and maintained in both Texas and Arizona until a clear idea of the meteorological conditions that brought about the violent weather changes had been obtained. Once their purpose was accomplished, many of these stations were abandoned and new ones were established elsewhere to solve other problems. The location of stations, however, was somewhat restricted to areas in which commercial or military telegraph lines were available. Forecasting was centralized in Washington until 1881, when local forecasts were authorized at some stations. The system of local forecasts was widespread by 1890, and district forecasters were provided for at the district stations in 1894.

**27.14** The appropriation act of June 10, 1872 (17 Stat. 366), authorized the Secretary of War to provide such "reports and signals as may be found necessary for the benefit of agriculture and commercial interests." Subsequently, the weather service turned its attention to specialized activities for the benefit of agriculture. In 1880, for example, frost warnings for the sugar growers of Louisiana were issued, and in the following year a system of observations and reports for the cotton region was started, which was carried out on an experimental basis from September to November 1881 with 131 observers. This system was established on a permanent basis in 1882, utilizing the railroad and telegraph lines in the Southern States to facilitate the transmission and dissemination of reports on rainfall and maximum and minimum temperatures in the cotton region. Because stations generally were established on the railroad lines, it was possible for reports to be telegraphed to district

weather stations. Later, similar specialized services were established for rice and tobacco growers. In 1896, after transfer of the weather service to the Department of Agriculture, similar specialized services were inaugurated for corn and wheat regions.

**27.15** In order to provide more adequate data on climatic conditions of agricultural regions, the Chief Signal Officer encouraged States to organize weather services similar to those in Iowa and Nevada, with at least one observer in every county. Eight States, including Kansas, Missouri, and Nebraska, established services in 1881; by 1892 the entire United States was covered by auxiliary State services, with more than 2,000 observers in all.

**27.16** Between 1871 and 1885, in an endeavor to discover the origins of meteoric disturbances and the laws governing them, the Signal Office employed volunteer and professional "aeronauts" to make upper air explorations and established many special stations, usually at the summits and bases of mountains, to make studies of the upper air. One such station was established at Pikes Peak, CO, in 1873. Because the weather service of the Signal Office laid its primary emphasis on dynamic meteorology (the prediction of storms, weather, and floods), it was criticized for slighting climatology. Nevertheless, it did preserve the basic records necessary for climatological research by concentrating in one place the climatological records created by its predecessors, by collecting an ever-increasing quantity of records from its own stations, and by accumulating the records from voluntary observers and post surgeons and from observers of the State weather services after this work ceased to be performed by the Smithsonian Institution and the Surgeon General's Office.

**27.17** Although its emphasis was on the practical aspects of dynamic meteorology, the Signal Office also carried on an extensive program of research. It was particularly prolific in its publications on meteorology. To assist Army personnel, the Chief Signal Office appointed a number of civilian experts, who were initially occupied with analyzing data furnished by the various stations in order to make weather predictions. After this work had become routinized, it was turned over to the Army officers so that the civilians could devote their time to questions about the science of meteorology and its application.

**27.18** The Army eventually took objection to the anomalous situation of a military organization such as the Signal Corps performing civilian functions in connection with the weather service, principally because the work was sustained by regular Army appropriations. Another complaint was that civilians in the weather service were governed by Army rules and regulations only in exceptional cases; they lived away from the barracks and were not considered a part of the organized military units. The ever-increasing hostility on the part of the Army toward the weather service peaked when the Signal Corps became so engrossed with its meteorological work that it began to neglect its military activities. Agitation for transfer of the weather service to a civilian agency began as early as 1882, but efforts to accomplish the transfer became mired in controversy. By 1890, however, popular discontent with the organization of the weather service had reached the point that Congress passed an act creating within the Department of Agriculture a Weather Bureau that was to assume the functions of the weather service. The records and property of the Signal Office pertaining to the weather service were divided by a joint committee, and the personnel of the weather service was transferred almost intact to the new agency, effective July 1, 1891. Enlisted men who so chose were discharged from the Army and appointed to the Weather Bureau. No break in the continuity of the work of the weather service occurred.

### The Weather Bureau

**27.19** The functions of the Weather Bureau were defined in the act of 1890 by the duties prescribed for its Chief. The Bureau was to be responsible for forecasting the weather; issuing storm warnings; displaying weather and flood signals for the benefit of agriculture, commerce, and navigation; gauging and reporting on rivers; maintaining and operating sea-coast telegraph lines; and collecting and transmitting marine intelligence for the benefit of commerce and navigation. The Bureau was also to report temperature and rainfall conditions for the cotton interests; display frost and cold-wave signals; distribute meteorological information in the interests of agriculture and commerce; and take those meteorological observations required to establish and record the climatic conditions of the United States or otherwise deemed essential for the proper execution of the foregoing duties. To accomplish these ends and to develop and broaden its activities in the interest of agriculture, the old weather service was reorganized. The most experienced and competent local weather forecasters were assigned to the larger cities and authorized to make

weather predictions for their areas, enabling them to furnish a more detailed description of local weather conditions than was possible from the Washington office. More emphasis was placed on use of weather maps in forecasting. Stations located at military posts were abolished and new stations established. The Weather Bureau resumed the collection and publication of meteorological reports from vessels, a function of the Signal Office that had been transferred to the Hydrographic Office of the Navy Department in 1888. This function essentially supplemented the work of the Hydrographic Office, and in 1904, upon the recommendation of an interdepartmental Board appointed by the President, the records and meteorological work of the Hydrographic Office were transferred to the Climatology Division of the Weather Bureau.

**27.20** With the exception of the correspondence files, the records of the Weather Bureau and its predecessors are arranged by type rather than by source, and the discussion that follows reflects that arrangement. Many of the individual series are arranged by name of State or Territory and thereunder by locality.

## CORRESPONDENCE AND RELATED RECORDS

### The Smithsonian Institution Meteorological Project

**27.21** The Project correspondence consists of two series. Most of the **letters received, 1848-1867** (4 ft.), are from meteorological correspondents who are identified in a list published in the *Annual Report of the Board of Regents of the Smithsonian Institution for the Year 1872*. For the most part, the letters document the administration of a national network of meteorological observers, although an occasional report of observations can be found among the more routine letters. Some letters discuss innovations in instrumentation or suggest novel interpretations of meteorological phenomena. The letters are arranged chronologically, except for letters dated between December 1855 and December 1856, which are arranged alphabetically by name of correspondent. The letters cover the following periods: December 1848 through March 1852; April 1853 through December 1854; December 1855 through December 1857; March through November 1859; and June 1860 through December 1867. Included with the letters at intervals of varying length are indexes by name of correspondent. Some of the letters are addressed to the Patent Office and to the Department of Agriculture. **Copies of letters sent, 1850-53** (1 vol., 2 in.), chiefly by the Assistant in Charge of Meteorology, are arranged chronologically. Both the letters received and letters sent are augmented by records held by the Smithsonian Institution Archives in Record Unit 60, Smithsonian Meteorological Project. In that collection is a series of "Incoming Correspondence," which fills some of the gaps in the letters received, and one volume of "Outgoing Correspondence, 1853-1854."

### The Signal Office

**27.22** Until the transfer of the weather service from the Signal Office, U.S. Army, to the Department of Agriculture in 1891, the system of recording and filing correspondence had followed the usual rules and regulations, insofar as possible, of the War Department. The Weather Bureau of the Department of Agriculture took over the files intact and continued the same system, with modification, until 1896, when subjective filing was discarded. Thereafter, all incoming letters were assigned to a classified category or group, numbered consecutively from January to December, and briefed or annotated on the outside cover or jacket with the letter number, the classification, the name of writer, place, and date, a brief or summary of the contents of the letter, a notation of action taken, cross-references to related papers, and a reference to, or a copy of, the letter sent in reply. Attached to each letter were all routing slips and memorandums connected with its handling. The receipt of each letter was recorded in one of the bound registers of letters received, somewhat misleadingly called "Letters Received Books." Registers were set up for each category, with entries giving the letter number, the date received, a brief of the letter, and the action taken. Letters sent books for each category contained an exact copy of each outgoing letter. Press copies were made for one category (Observers) after 1878 and for other categories at varying dates thereafter. Both registers of letters received and letters sent books were thoroughly and accurately indexed by name and/or place and usually by subject. The correspondent's name was written in black ink, while other names mentioned in the letters were written in red ink. Initially the indexes were recorded in each volume, but as the correspondence increased, separate

volumes had to be used to index letters for an entire year.

**27.23** The categories of correspondence established to facilitate the work and to simplify the handling of mail by the Correspondence Division reflected various aspects of Office business. Some categories, such as Property, Voluntary Observers, Agricultural, Telegraphic, and Enlistment, were well-defined, but others, such as the original categories--Signal and Miscellaneous--were of a more general nature, maintained primarily to provide a place for communications not assigned to some definite category. The reasons determining the assignment of letters to either of these general categories are unclear. For example, analyses of the records show that prior to the establishment of the Telegraphic category, communications on the building and maintenance of telegraph lines were supposed to be filed in Miscellaneous. However, just as many letters on those subjects were filed in Signal, with no apparent reason for their placement in that category. Likewise, letters to observers concerning their duties were to be placed in the Observers category, yet letters to observers appear regularly in both the Miscellaneous and Signal categories. As a result, it is frequently difficult to locate specific documents. Additional information about the various correspondence categories is given below. Included are lists of the records available for each category as well as some general conclusions about the assignment of letters. Researchers who are seeking particular documents should not place too much reliance on these conclusions but should be ready to widen the parameters of their search if the correspondence categories they first try prove unfruitful. Unless indicated otherwise, it should be assumed that all series of letters received are arranged chronologically by year and thereunder by numbers assigned in the various registers of letters received.

Signal Series

**27.24** Before the establishment of the weather service in 1870, the relatively few letters received by the Signal Office pertained to the basic function of the Office--military signaling and related matters. After the weather service was organized, such letters were filed in a category called Signal, while letters relating to the weather service functions were filed in a Miscellaneous category. Since it was the initial file established, the Signal category contained correspondence of an administrative nature--usually regarding functions of the adjutant general or the executive officer--and those communications not specifically assigned to any other division or for which no correspondence category had been established. For example, from 1881 until a separate category was established for them in 1891, letters relating to the State weather services were filed in the Signal category. However, as the organization of the Signal Office became more complex, the Signal category lost much of its comprehensive nature. When the great number of letters in the Signal file concerning property and accounting was recognized in 1871, the letters received books (registers) began to be labeled "Signal and Property." Although the Property letters were still registered in the same volumes as the Signal letters, they were numbered separately and placed in separate files. In the following year, a separate Property category was established. Other specialized categories established included Enlistment, which was set up in 1881 for certain personnel letters, and Muster, which was created in 1888. In addition, the original nature of the Signal category itself changed. The distinction between the Signal and Miscellaneous categories became less clear, as the decrease of the military functions of the Signal Office and the increase in its meteorological activities was reflected in the Office correspondence, almost all of which related in some way to meteorological matters. The various series constituting the Signal category records are listed below:

1. **Letters Sent, 1870-84, 1888-91** (26 vols., 5 ft.).
2. **Registers of Letters Received, 1870, 1872-91** (38 vols., 7 ft.).
3. **Registers of Letters Received, Jan 1871-July 1872 [Signal and Property Division]** (3 vols., 9 in.).
4. **Letters received, 1870-91** (88 ft.), are arranged chronologically by year and thereunder by number assigned in the registers of letters received, with the exception of 1870, when the arrangement is alphabetical by surname of writer.

Miscellaneous Series

**27.25** The Miscellaneous category was established in February 1870 to contain all communications of the Office of the Chief Signal Officer pertaining to the operation of the weather service. Originally called Meteorology, it was intended to be the central file of the Division of Telegrams and Reports

for the Benefit of Commerce and Agriculture, which was organized to administer the meteorological work. When the weather service work of the Division exceeded the military functions of the Signal Office, the distinction between meteorology and other functions became impractical. Because the Miscellaneous file quickly outgrew the status of a mere divisional file, it was soon divided into other, more specialized categories, including Observers, Telegraphic, Agricultural, and Voluntary Observers or Volunteer Reports. Between 1876 and 1886 all letters written by the Chief Signal Officer, which included the more important letters formerly recorded in the Miscellaneous letters sent books, were copied into a separate set of volumes.

**27.26** In 1884 the similarity in content of materials filed in the Signal and Miscellaneous categories led to the merging of the Signal and Miscellaneous files. This was accomplished by discontinuing the Signal letters sent books, the registers of Miscellaneous letters received, and the Miscellaneous files. All incoming letters of the two former categories were recorded in Signal registers of letters received and filed in Signal files, and outgoing letters were recorded either in Miscellaneous letters sent books or in the Chief Signal Officer letters sent books. Thus between March 1884 and December 1887, letters sent books were labeled "Miscellaneous" and registers were labeled "Letters Received Signal."

**27.27** On January 1, 1888, a decisive change was made when the Signal and Miscellaneous categories were reinstituted in their component parts. Thereafter, the Signal letters received consisted of the more important communications, such as those from officials and persons of prominence, those that were or might become the basis of executive action, and those for which a full record appeared necessary. The letters sent books contained press copies of replies to the incoming letters and of other important communications. As thus defined, records in the Signal category constituted the executive and to a large extent administrative files of the Signal Office. The category was discontinued at the end of 1891 and replaced by various series that were established by the Weather Bureau. Among the materials filed in the Signal category are communications relating to personnel (except for those placed in the Enlistment and Muster categories), discipline, and instruction; military signaling and all other military matters, such as relations with Army officials and the War Department, court martials, desertions, recruitment, and participation in Indian wars; and such administrative and organizational activities as assignments, appointments, regulations, orders, instructions, and inspections. Also included is correspondence with heads of Departments and Bureaus (except for letters recorded in the Chief Signal Officer's letters sent books).

**27.28** After January 1, 1888, the Miscellaneous category covered only unimportant letters, received principally from private individuals on matters unlikely to be of continuing interest after action had been taken. In addition, Miscellaneous letters sent books were further divided into Shipmasters books, which contained all letters to marine observers, acknowledging their reports, and into Records books kept by the Records Division. These two groups of letters sent books were given the Miscellaneous classification and numbered as part of the Miscellaneous series of letters sent. The Records category, which covered requests for meteorological data and correspondence with voluntary observers, was, in effect, a revival of the Voluntary Observers series, which had been terminated in 1884 (see 27.34).

**27.29** To recapitulate, miscellaneous files went through three rather distinct periods. From 1870 to 1883, Miscellaneous consisted of all general correspondence not placed in the Signal category and relating to meteorological, agricultural, and telegraphic work, except for direct correspondence with observers and that placed in the Agricultural and Telegraphic categories between 1873 and 1877. From 1884 to 1887, it merged with Signal to contain all of the important correspondence not specifically assigned to Observers, Enlistment, Property, and Chief Signal Officer's letters sent books. From 1888 to 1892, it consisted of unimportant letters of little value, mostly from private individuals.

**27.30** The various series of Miscellaneous records are listed below:

1. **Letters Sent, 1870-92** (77 vols., 14 ft.).
2. **Index to Letters Sent, Vols. 1-4 [Record Letters Sent], Feb. 17, 1870-May 23, 1872** (2 vols., 5 in.).
3. **Registers of Letters Received, 1870-84, 1885-92** (29 vols., 7 ft.).
4. **Letters received, 1870-84, 1888-95** (109 ft.), are arranged chronologically and thereunder by number assigned in the registers of letters received, except for 1870. When the Miscellaneous category was first used during fiscal year 1870, the incoming letters, instead of being numbered in a single numer-

ical sequence in the order received, were given a separate set of numbers for each letter of the alphabet. Consequently, the letters are arranged by the first letter of the writer's surname and thereunder alphabetically. Also during fiscal year 1870, the relatively few letters received from executive departments were numbered separately, marked W.D. for War Department, S.D. for State Department, etc., and placed in a "Special" file, which is part of this series. Also placed in the Special file were telegrams, marked "Tel."

Chief Signal Officer Series

**27.31** This set of letter books was used to record all communications signed by the Chief Signal Officer or Acting Chief Signal Officer. The volumes contain the more important letters, including those addressed to persons not attached to the Signal Office, such as cabinet officers, persons of prominence, and foreign cooperators. The letters are replies to incoming letters that were filed under all category designations.

**Letters Sent, 1876-86** (42 vols., 10 ft.).

Observers Series

**27.32** Beginning in 1872, correspondence with the observers at weather stations was placed in an Observers category, which continued without a break until the end of 1893. In general, documents in this category relate to all matters pertaining to the duties of observers at stations. Included are instructions to individual observers, letters relating to occurrences at individual stations, special reports, and documents concerning matters of interest, such as data on unusual meteorological phenomena. Many routine letters dealing with such matters as leaves of absence, requests for assistance, station routine, instrument care, completion of reports and forms, and correction of errors were destroyed. Also absent from this category are general instructions and regulations for the service as a whole, which were placed in the Signal category, or materials concerning matters of policy or of similar importance, which were assigned to the Signal or Miscellaneous categories.

1. **Letters Sent, 1872-93** (144 vols., 29 ft.).
2. **Registers of Letters Received, 1872-93** (54 vols., 13 ft.).
3. **Letters received, 1872-93** (50 ft.), are arranged chronologically by year and thereunder by number assigned in the registers of letters received through 1887. Thereafter the letters for each year are arranged alphabetically by location.
4. **Semi-annual reports, 1874-86** (8 ft.), were removed from the letter files and maintained separately as a special file. They are arranged chronologically by year and thereunder numerically by register number.

Voluntary Observers Series

**27.33** When the Signal Office assumed the voluntary observer system of the Smithsonian Institution in 1874, letters from the observers were placed in files labeled VR and registered in letters received books designated Volunteer Reports. Replies were recorded in Voluntary Observers letters sent books. At first the regular meteorological reports of the domestic and foreign cooperators were registered in the letters received books along with the incoming letters, but entry of the reports was discontinued in 1883. As only a few hundred letters were involved annually, the series was discontinued at the end of 1884. Communications from voluntary observers were thereafter assigned to the Signal category, and replies were recorded in the Chief Signal Officer's letters sent books until 1887, when a new category called Records was started. Letters sent books were kept by the Records Division but were labeled and numbered with the volumes of Miscellaneous; the letters received books generally were labeled VR Records, and the old designation VR was used on the files of letters received. This new category for volunteer observers correspondence continued in use through July 1893, although the letters sent books were discontinued in 1891. Material assigned to the volunteer observers category was routine, and few, if any, communications of importance were included. The category consists of correspondence (except for letters concerning the loan of instruments, which were placed in Property) with voluntary observers or prospective observers, relative to duties, reports required, and similar topics. It does not contain material about the State weather service organized after 1881, as this was placed in Signal until a separate series for it was begun in 1891.

1. **Letters Sent, 1874-84** (11 vols., 2 ft.).
2. **Registers of Letters Received, 1874-85, 1888-93** (19 vols., 3 ft.).

**3. Letters received, 1874-84, 1888-93** (24 ft.), are arranged by year and thereunder by number assigned in the registers of letters received, except for the period 1888-90, when the letters are arranged alphabetically by name of location.

Data/Records Series

**27.34** This "D" or data file was established in 1887 for the use of the Records Division. The letters relate to requests from voluntary observers for meteorological data, reports prepared in response to requests originating in the Signal Office, acknowledgments of data furnished by the Office, and all replies to letters sent by the Records Division. The letters sent by the Records Division are recorded in the "Records" segment of the Miscellaneous letters sent series (27.28), which is, in effect, a revival of the voluntary observers letters sent series which was terminated in 1884. During the interim, 1884-87, relevant letters had been recorded in the Chief Signal Officer's letters sent books.

**1. Register of Letters Received, 1888-93** (1 vol., 3 in.).
**2. Letters Received, 1887-94** (6 ft.).

Agricultural Series

**27.35** This category was established in 1873 for letters relating to agriculture that had formerly been filed in the Miscellaneous category. It chiefly covers correspondence with postmasters concerning the distribution and display of the *Farmers' Bulletin* and forecasts, letters exchanged with agricultural societies, and all other communications relating to agricultural interests affected by the services of the Signal Office. After 1877 such communications were once again filed in Miscellaneous.

**1. Letters Sent, 1873-78** (3 vols., 7 in.).
**2. Registers of Letters Received, 1873-77** (4 vols., 10 in.).
**3. Letters Received, 1873-77** (4 ft.).

Telegraphic Series

**27.36** The Telegraphic category was used between 1873 and 1877 for material formerly filed in Miscellaneous relating to the building and maintenance of military telegraph lines and to the meteorological telegraph service. The letters concern such matters as relations with commercial telegraph companies and legal aspects of the relationship; coast telegraph lines, meteorological circuits, codes and ciphers; and reconnaissance of telegraph routes. Much of the correspondence pertains to a legal controversy between the Government and Western Union.

**1. Letters Sent, 1873-77** (2 vols., 4 in.).
**2. Registers of Letters Received, 1873-77** (2 vols., 5 in.).
**3. Letters Received, 1873-77** (4 ft.).

Apparently during this period the "Telegraph Room" was authorized to handle certain classes of mail without reference to the central files. The press copies of relatively routine communidations listed below are not considered to be part of the formally established files.

**Letters Sent From Telegraph Room, 1874-77** (2 vols., 3 in.).

Confidential Series

**27.37** The three series listed below document letters of a confidential nature written or received by the Chief Signal Officer.

**1. Letters Sent, 1884-89** (1 vol., 3 in.).
**2. Register of Letters Received, 1884-89** (1 vol., 3 in.).
**3. Letters Received, 1884-89** (7 in.).

Mustering Series

**27.38** These press copies of letters sent by the Mustering Officer pertain to payroll, enlistment and mustering of men, and the Signal Corps Recruiting Service. This type of material had formerly been filed in the Signal category.

**Letters Sent by Mustering Officer, Mar. 1888-July 1891** (2 vols., 5 in.).

Additional Correspondence and Related Records

**27.39** Described below are three series that fall outside the correspondence categories which are discussed above.

**1. Record of Telegrams Sent and Copies of Telegrams Received, 1871** (1 vol., 2 in.). For one year only, incoming and outgoing telegrams were recorded in a volume labeled "Telegrams Sent and Received." The use of the book was discontinued at the end of the year. Thereafter, telegrams were recorded and handled in the same fashion as correspondence.

**2.** An apparently incomplete set of **registers of letters received from CA, AZ, and NM, Oct. 1874-Aug. 1875, 1878, Dec. 1880-Dec. 1886** (5 vols., 1 ft.), records date of receipt and file number, name of writer, and date and subject of letters received. Also included are endorsements showing action taken.

**3. A register of letters received by the observer at Fort Gibson, Indian Territory, 1873-74** (1 vol., 1 in.), gives date of receipt, file number, name of writer, and date and subject of letters received. It also contains an alphabetical index to names and subjects. Copies of brief replies are found with a few entries.

THE WEATHER BUREAU

**27.40** When the Weather Bureau took charge of the weather service on July 1, 1891, eight of the Signal Office correspondence groups were in active use, including Signal, Miscellaneous, Accounts, Observers, Volunteer Records, and Data/ Records. No additional letters received were classified as Signal, although certain letters sent were recorded in Signal letter books until December 1891. These were in most cases answers to letters received and classified as Correspondence, one of several categories the Weather Bureau initiated in July 1891. Miscellaneous was seldom used after 1892. On January 1, 1894, Records, which had replaced Data/Records and Volunteer Records in July 1893, was discontinued. The Bureau terminated the classification of correspondence in July 1894. Thereafter several designations were used briefly to identify the correspondence until 1912, when a new filing scheme based on the Dewey decimal classification system was adopted. The various categories that were used to file Weather Bureau correspondence prior to 1912 are discussed below.

State Weather Service Series

**27.41** One of the categories set up in 1891, this designation covered all material relating to this cooperative enterprise. The primary functions of the State services were the gathering of climatological data and the dissemination of the weather forecasts and special warnings issued by the Signal Office. By 1887 the provision of information on weather conditions affecting crops became the most important feature of the work of the State services. Assigned to this category were letters from observers, voluntary observers, and others concerning crops, requests for instruments, display of weather and temperature signals, and related matters.

**1. Registers of Letters Received, 1891-94** (2 vols., 5 in.).

**2. Letters Received, 1891-94** (28 ft.).

Correspondence Series

**27.42** Also established in 1891, this series consists of all incoming material, including important letters, not expressly relegated to some other series. Responses to letters assigned to this category were recorded in books labeled Chief Clerk or Chief of Bureau, or in Signal until that category was dropped in December 1891. Letters recorded in the Signal letters sent volumes generally concern matters relating to the liquidation of the former military organization of the office, which took several months to accomplish. Although no clear distinction exists between the types of letters recorded in the Chief Clerk and Chief of Bureau letter books, it appears that the latter designation was applied to letters similar to those placed in the Chief Signal Officer letters sent books during the 1876-86 period. Special, policy, or personal letters were recorded in the Chief of Bureau volumes, while routine administrative letters were transcribed in the Chief Clerk volumes, which have been destroyed. In November 1893 a separate letters sent book was set up for the Chief Clerk to record letters of a confidential nature; this volume has been preserved.

**1. Letters Sent by the Chief of the Bureau, 1891-95, 1897-1911** (25 vols., 2 ft.).

**2. Letters Sent by the Chief Clerk (Confidential), 1893-97** (1 vol., 2 in.).

**3. Registers of Letters Received, 1891-94** (2 vols., 6 in.).

**4. Letters Received, 1891-94** (17 ft.). These files bear the following designations: "Corr," 1891-93; and "CC," 1894.

**27.43** Beginning in July 1894 all incoming letters were recorded chronologically in a letters received book, numbered in the order received, and filed in a single file. The letters received book was labeled "Accounts and Miscellaneous," and the files were marked "Mis." In 1895 both the books and the files were labeled "Mis."

1. Subject and name **indexes to letters received, 1892-1906** (29 vols., 7 ft.), consist of two parallel sets of 14 volumes each. Entries in the set labeled "Subject" are arranged alphabetically by subject; those in the set labeled "Alphabetical" are arranged alphabetically by name or place. A slender supplemental volume covers the period Dec. 19, 1904-Feb. 7, 1905.

2. **Registers of Letters Received, 1894-1911** (17 vols., 4 ft.).

3. **Letters Received, 1894-1911** (387 ft.).

Forecast Division Series

**27.44** This category was established in September 1893 for correspondence concerning storm, flood, cold, and other types of warning services. It also applied to all material relating to the study of dynamic meteorology and the general forecasting activities of the Bureau.

**Letters Received by the Forecast Division, 1893-94** (2 ft.). Included are requests for forecasts and verifications of forecasts, and letters relating to station maps.

## ADMINISTRATIVE RECORDS

General Records

**27.45 Miscellaneous records of Divisions of the Weather Bureau, ca. 1887-1912** (10 in.), include those created or maintained by the Mustering Office and by the Indications, Forecast, Instrument, and Data/Records Divisions.

1. Bound press copies (1 vol., 1 in.) of final financial statements, July 1889-June 1891, kept by the Mustering Office, document the financial status of Signal Service enlisted men at the time of their discharge from military service. These forms provide considerable personal information as well, including place and State of birth, age at enlistment, height, complexion, color of hair and eyes, prior occupation, place of enlistment, and date and place of discharge. The volume contains a name index. For information concerning other personnel records, see 27.110-27.112.

2. A journal (1 vol., 1 in.), compiled by the Indications Division, covers the period January 1, 1887, through December 31, 1891. The Division was concerned with the discontinuance or establishment of reporting stations and cold-wave or wind signal stations; changes in force; changes in detail; and absences and sicknesses. The volume contains an index to names and subjects.

3. A journal (1 vol., 1 in.) similar to the one discussed above is available for the Forecast Division for the period January 1, 1892, through June 2, 1898. It also contains an index to names and sub-jects.

4. The work of the Instrument Division is documented by both letters sent and reports. Bound press copies of letters sent (2 vols., 3 in.) cover the periods June 8, 1896, to March 19, 1897, and November 4, 1900, to February 3, 1901. Copies of reports (½ in.) are available for the period 1905-6 and 1909-12.

5. Press copies of letters and statistical tables originating in the Data/Records Division are bound in a volume (1 in.) labeled "No. 4½, April to October 1895." Some of the tables contain statistics for much earlier dates.

**27.46** Considerable information about the workings of the weather service and its successor, the Weather Bureau, can be found in the series discussed below:

1. Copies of orders are recorded in the set of **order books, 1870-84** (13 vols., 3 ft.). The volumes contain indexes with entries under the following headings: names of individuals, boards appointed, instructions, Signal Service orders, subjects, places, and circulars.

2. **Reports and minutes of meetings of the General Board of Assistants [Reports of General Boards], 1881-84** (2 vols., 3 in.), document the work of an advisory group. Some of the subjects reported on are the advisability of discontinuing telegraphic reports from Signal Service stations; the advantages to be secured by stationing an officer of the Service in San Francisco to discharge the special work of the weather service; and a proposal to send preprinted

postal cards from each of the centers of the special districts in the cotton belt to all the other centers to facilitate the recording of rainfall. The spine on the volume of reports, which cover the period 1881 to 1882, reads "Committees Appointed, 1881-82"; the spine on the volume of minutes reads "Reports of General Boards, 1881-84."

3. **Statements prepared for a Senate committee, 1887** (4 in.), provide information about the duties of the various components of the Signal Office.

4. The **records relating to the transfer of meteorological functions from the War Department to the Agriculture Department, 1874** (3 in.), consist primarily of printed congressional documents concerning the organization of the Signal Service and the necessity of transferring the weather service to a civilian agency.

**27.47** Copies of major administrative issuances are found in **miscellaneous operational records, 1871-1912** (5 ft.), a mixture of unpublished records and publications of the Signal Office and the Weather Bureau. Included are memorandum books (12 vols.) containing press copies of memorandums issued during the period 1885-1911; slip books (7 vols.) containing press copies of communications sent by the Chief Clerk, primarily to the Accounts Division; original copies of numbered instructions, with gaps, arranged by year, 1875-84, and thereunder numerically; and a volume containing the following: "Record of Distribution of Instructions, etc., Record of Instructions, Transportation, and Reports of Departures and Arrivals." Published materials include printed numbered instructions issued in 1888 and 1907; *Instructions to Observers of the Signal Service, United States Army*, 1881; *General Orders and Circulars, Signal Office, War Department*, 1884; Frank Hagar Bigelow's *A Manual for Observers in Climatology and Evaporations*, 1909; and *Telegraph Cipher, New Edition, Signal Service, U.S.A.*, 1875, which includes a list of stations and their telegraphic designation.

Records Relating to Military and Weather Bureau Telegraph Lines

**27.48** By the mid-1880's, U.S. military telegraph lines were operating in the Departments of Dakota, the Missouri, the Columbia and California, Arizona, Texas, and the Platte. A series identified as **miscellaneous records relating to the U.S. military telegraph, 1880-82** (7 vols. and 7 photographs, 2 ft.), consists chiefly of detailed logs documenting the transmission of official and commercial telegrams in Texas and the Territories of Dakota and Montana. The photographs, ca. 1882, are of military subjects and appear to be plates for an unidentified manuscript. Press copies of letters sent by officers in charge of the U.S. Military Telegraph Lines California and Arizona Division make up the bulk of the **miscellaneous letters, May 19, 1884-Dec. 31, 1885** (1 vol., 3 in.). Most of the letters concern the maintenance of the telegraph system and personnel matters. The Division was headquartered in Phoenix, Arizona Territory. Similar letters and related records are found in Record Group 111, Records of the Office of the Chief Signal Officer, for the following Divisions: New Mexico (1876-81), Northwestern (1878-85), Northern (1888-98), and Texas (1879-81).

**27.49** Among the documents in a series called **miscellaneous records of the Weather Bureau concerning telegraph lines to various weather stations, ca. 1902-32** (1 vol. and unbound papers, 5 in.), is a bound report titled "Weather Bureau Telegraph and Telephone Lines, Data Covering the Period from the Construction to December 29, 1914." The report includes a narrative history of each telegraph line and a sketch map showing the location of the lines and their stations.

Records Concerning Weather Stations

**27.50** A set of volumes, **Miscellaneous Books, ca. 1883-1904** (5 vols., 1 ft.), numbered 7 to 11, contains chronological listings of events, personnel changes, and other significant matters concerning weather stations operating during the time period covered by each volume (vol. 7, 1883-84; vol. 8, 1885; vol. 9, 1886-88; etc.). Also included are cross-references to original documents filed in various series of letters received, letters sent, instructions, memorandums, and circulars, which document the entries. Some of the 1883 listings include references to earlier documents. Each volume contains an alphabetical index by name of station or locality. Researchers interested either in the history of stations functioning during this 22-year period or in their environs will find these volumes particularly valuable.

**27.51** Personnel at all meteorological observation stations were required to keep journals. These **daily journals and abstracts, 1870-1907** (829 vols., 179 ft.), are primarily narrative accounts dealing with

weather phenomena not easily tabulated on form reports, but a secondary purpose was to preserve for reference a complete recounting of daily happenings at each station. The journals, therefore, contain narrative descriptions of such matters as flights of birds, early vegetation, earthquakes, auroras, thunderstorms, distant lightning, high winds and gales, the occurrence of frost, particularly first and last killing frost, first ice, heavy rainfalls, exceptional meteorological phenomena such as meteoric displays, and similar happenings. Particular attention was called for in descriptions of tornadoes and optical phenomena such as auroras, solar and lunar halos, rainbows, coronas, parhelia, paraselenae, and mirages. The character of sunrise and sunset was required until June 1896. The amount of snowfall on the ground and deposits of fog, frost, or dew in the rain gauge and the beginning, ending, and amount of precipitation were noted in the journal, as were the character of moonlight, and fog. Stations located on rivers recorded special phenomena affecting navigation, and lake and seacoast stations noted the opening and closing of navigation, names of first vessel to arrive and last one to depart, nature of the cargo in each case, and number of cautionary signals. From time to time special data were collected. For example, in the 1880's, information on the Rocky Mountain locusts (visitations, habits, and damage inflicted) was recorded in journals maintained by stations in the affected regions. The meteorological observations included in the journal entries consist largely of narrative descriptions of wind, precipitation, river level, clouds, storms, and effects of inclement weather.

**27.52** Matters of an administrative nature concerning station operations were also recorded in the journals. The entries deal with the station's instruments, personnel, procedures, cautionary signals, and related matters. When a new station was opened, the first pages of the journal were used to record the date of the observer's arrival, the rent of the office, its occupancy, and the time observations began. Frequently considerable detail was given concerning the establishment of a new station; in this regard, the early entries made at the Pikes Peak station, with the observer's account of the rigors and problems involved in setting up and maintaining a telegraph line and a station at the summit, are particularly interesting and entertaining. Information about station personnel and the condition of equipment and the station's quarters also was noted, along with accounts of station inspections and visits from officials. After 1905 matters of administrative detail were almost entirely eliminated except for the account of absences and changes in station personnel.

**27.53** Monthly abstracts were made of these daily records and forwarded to the Washington Office of the U.S. Signal Service. Until 1888 abstracts of the journals were made on paper with no form number, but in 1881 a cover sheet, Form 140, was added. This form, which served as an index, contained a printed list of all topics likely to be mentioned in a journal, with space for writing in the date on which the topic is mentioned. In 1887 Form 140 was expanded to 15 pages, providing space for daily entries. The form was renumbered in 1891, becoming Form 1014, and the title "Abstract of Daily Journal" was changed to "Daily Journal," but the data submitted remained the same. An important change occurred in 1904, when recordkeeping procedures were revised at all the stations. Thereafter, entries in the daily journals were made only for important events rather than for daily happenings. An interesting feature of the journals is the use of marginal notes to facilitate reference. These notes, made in red ink, identify prominent subjects. The subjects were indexed monthly; after 1896 they were also indexed annually.

**27.54** The journals and abstracts are arranged in three segments: alphabetically by locality for the period 1870-87; alphabetically by State, 1888-90; and chronologically by year, and thereunder alphabetically by locality, after 1890. Represented in the records are all of the regular stations of observation operated by the Signal Office and the Weather Bureau from 1870 to 1907; the records do not cover river, rainfall, and other special stations. Records are available for the locations and time periods shown in the Supplement. The records for the New Orleans, LA, station for the period November 1870 to December 1907 are reproduced as part of National Archives Microfilm Publication M1379, *Selected Documents From the Records of the Weather Bureau Relating to New Orleans, 1870-1912* (rolls 1-6), produced in cooperation with The Historic New Orleans Collection.

**27.55** Weather stations were periodically inspected by U.S. Army officers before 1890 and thereafter by Weather Bureau civilian inspectors. Their **inspection reports, 1871-ca. 1930** (105 vols., unbound papers, 21 ft.), which deal with all aspects of a station's operations, provide information concerning the station's address, floor plan, equipment, books, records, and personnel, as well as copies of the bulletins, reports, maps, and other material it distributed.

The intervals between inspections were irregular. The records are arranged alphabetically by name of station in two segments. Reports submitted before 1890 were bound; reports received in 1890 and later were not. Included in the first container of unbound reports is an **index to inspection reports, 1890-1912** (1 vol., 1 in.), which gives the names of the inspectors and dates of inspection for each station. The entries are arranged by name of station and thereunder chronologically. Some entries are annotated to show when stations were closed or reestablished. Reports are available for the locations and time periods shown in the Supplement. Those for the weather station at New Orleans, LA, are reproduced as part of National Archives Microfilm Publication M1379 (roll 8).

**27.56 Miscellaneous records relating to deeds of property and abstracts of title, ca. 1901-9, 1918, 1926, 1956** (5 in.), are arranged by name of the station involved. Included are some papers relating to Bentonville, AR (1905); Charles City, IA (1907); Dodge City, KS (1909); Duluth, MN (1903); Iola, KS (1907); Oklahoma City, Oklahoma Territory (1904); St. Joseph, MO (1909); and Sheridan, WY (1906).

**27.57** Blueprints, tracings, and specifications constitute the series of **building plans of Weather Bureau stations, 1896-1924** (4 ft.). Materials are available for facilities in Arkansas (Bentonville, Fort Smith); California (Southeast Farallon Island, Sandburg); Iowa (Charles City, Des Moines); Kansas (Dodge City, Iola); Minnesota (Duluth); New Mexico (Roswell); North Dakota (Devils Lake); Oklahoma (Oklahoma City); Texas (Amarillo, Corpus Christi); Washington (Neah Bay, North Head, Port Angeles, Tatoosh Island); and Wyoming (Sheridan, Yellowstone Park). Also available is an undated sketch showing the size of the lot and the location of station facilities in North Platte, NE. Additional building plans of Weather Bureau stations, 1894-96, constitute the architectural and engineering plans (280 items) filed with the separately maintained cartographic records.

**27.58 Replies to circular letters from the Chief Clerk and Chief of Bureau, 1896-98** (3 vols., 7 in.), were arranged alphabetically by name of location and bound. The first volume contains responses to the Chief Clerk's request of April 3, 1896, for information concerning the duty hours of the employees at each station. Replies to a letter of September 16, 1896, from the Chief of Bureau, directing all stations to "report in writing the days set apart by legislative enactment in their respective states as holidays," constitute volume two. The Chief Clerk's request of May 19, 1898, for information on the "present population of" each station area, obtained "from best available sources, and in an unofficial way," elicited the reports making up volume three.

**27.59** A journal documenting activities and personnel actions at the station at North Head, WA, during the period 1905-36, is one of several volumes constituting **station memorandums and log books, ca. 1905-53** (5 vols., 5 in.). The volume contains a name and subject index.

Publications and Related Records

**27.60** Three series of annual reports, many of which are rich sources of information about the stations and their environs, are available. Bound unpublished **annual reports of Signal Office and Weather Bureau Stations, 1888-96** (18 vols., 5 ft.), are arranged chronologically by year and thereunder alphabetically by name of station. The volumes for the period 1888-91 are labeled "Signal Service Observer's Annual Report." The report forms are divided into sections with variations of the following titles: Weather Maps, Bulletins, Press Reports; Flag or Whistle Weather Signals; Cold-Wave Signals; Storm, Cautionary, and Wind-Direction Signals; River Service; Cotton-Region Service; General Remarks; Location of Office and Instruments; and Station Force. Copies of the published **Annual Reports of the Chief Signal Officer, War Department, 1871-90** (42 vols., 9 ft.), and **Annual Reports of the Chief of the Weather Bureau, Department of Agriculture, 1891-1935** (70 vols., 6 ft.), are arranged chronologically.

**27.61** A partial set of the ***Monthly Weather Review*, ca. 1881-86** (23 items, 1 ft.), provides a narrative and tabular summary of weather conditions throughout the United States for the months covered. Included in this collection are 3 issues from 1881, 6 from 1883, 10 from 1884, and 4 from 1886. Each issue contains sections on the following: Barometric Pressure; International Meteorology; Temperature of the Air; Precipitation; Relative Humidity; Winds; Verifications; Navigation (stage of water in rivers, high tides, low tides, and when appropriate, ice in rivers and harbors, and floods); Temperature of Water; Atmospheric Electricity (thunderstorms, auroras, zodiacal light, telegraphic communication inter-

fered with by atmospheric electricity); Optical Phenomena; and Miscellaneous Phenomena. Also included in each issue are copies of the three types of War Department weather maps described in 27.107.3. This publication was issued by the Signal Office from June 1873 through June 1891 and thereafter by the Weather Bureau.

**27.62 Miscellaneous publications collected by the Weather Bureau, 1887-1909** (27 items, 5 in.), consist largely of manufacturers' catalogs. Included, however, are several publications designed to attract settlers and businesses to New Mexico Territory, particularly the Santa Fe area. Most of these are annotated to identify the sections relating to climate. Among these are the following:

1. Max Frost and Paul A.F. Walter, "Santa Fe County: The Heart of New Mexico Rich in History and Resources" (1906: The Bureau of Immigration of New Mexico).
2. "Ho! To the Land of Sunshine: A Guide to New Mexico for the Homeseeker. Public Lands and the Laws and Regulations under which they can be Obtained. General Information for the Settler and Immigrant" (1907: The Bureau of Immigration of the Territory of New Mexico, Seventh Revised Edition). This booklet includes a "Post Route Map of the Territory."
3. "Santa Fe: The Most Interesting Town in the United States" (1908: Board of Trade, Santa Fe, NM).
4. Paul A.F. Walter, "Santa Fe County, New Mexico: A Country Rich in Attractions for the Sight Seeker, the Health Seeker, the Wealth Seeker and Home Seeker" (1909: The Bureau of Immigration of New Mexico).
5. "The Sights of Santa Fe" (undated: The New Mexican Printing Co.).
6. "Historic Santa Fe as a Health Resort" (undated).

**27.63 Miscellaneous publications of the Weather Bureau, U.S. Department of Agriculture, ca. 1873-1930** (12 items, 5 in.), include two relevant items from the Bureau's series of lettered bulletins. They are listed below:

1. Weather Bureau Bulletin S, "Report on the Temperature and Vapor Tensions of the United States Reduced to a Homogeneous System of 24 Hourly Observations for the 33-Year Interval, 1873-1905" (1909).
2. Weather Bureau Bulletin V, "Frost Data of the United States and length of the Crop Growing Season as Determined from the Average of the Latest and Earliest Dates of Killing Frost," by C. Day (1911).

**27.64** In 1908 and 1909 the Climatological Division conducted surveys to assess the value of some of its publications and of the work of the Weather Bureau as a whole. A 1908 circular letter requested opinions of the usefulness of certain climatological publications. The responses to that letter make up the bulk of the **reports on value of climatological publications, 1903-08** (9 in.). The following excerpt of a letter of June 5, 1908, from the New Mexico Section, Climatological Service, is fairly representative of the nature of the responses:

> "New Mexico is settling rapidly. The Territorial Bureau of Immigration and the various railroads and real estate men are using the reports (both monthly and annual) to advertise the climatic advantages of the Territory. Health seekers and home seekers from all over the United States are requesting these reports almost daily. They are used by the Territorial Experiment Station in connection with agricultural experiments. They are also used by the Reclamation Service in connection with irrigation projects; individuals and corporations also make similar use of them."

A similar circular distributed in 1909 asked for information about the ways weather data furnished by the Bureau benefited various interests in the community. In his lengthy reply of December 8, 1909, the Director of the Washington Section, Climatological Service, located in Seattle, wrote the following:

> So many and varied concerns and interests have received and utilized the climate statistics available at this office that it is impossible to enumerate more than a few of them here. They embrace engineers, builders, investors, settlers, students, commercial concerns, fire insurance associations, farmers, horticulturists, experimentors in science, travellers, irrigators, aviators, photographers, and others.

The Local Forecaster at Shreveport, LA, concluded his report of September 28, 1909, by stating, "I be-

lieve I can safely say the demand for weather and river data and forecasts in this section will always increase, to the end of time." The responses to the 1909 circular constitute the bulk of the **records relating to comments on the applications of Weather Bureau information, 1909-11** (1 ft.). The letters are arranged in numerical files or "packs."

**27.65** Information concerning the value placed by State officials and others on the work of the Weather Bureau as a whole can be found in the letters and newspaper clippings constituting the **records relating to opinions concerning Emerson Hough's article on the Weather Bureau, 1909** (1 ft.). The letters elicited by the article, which was published in *Everybody's Magazine*, are arranged by State.

**27.66** In 1922, Henry E. Williams, a meteorologist who had retired from the Weather Bureau, solicited former members of the Meteorological Section of the Signal Corps and present members of the Weather Bureau for information to be incorporated in a book on the traditions and early history of the weather service. The responses, which are arranged in numbered files (1-102), make up the bulk of the series called **reminiscences of employees and miscellaneous historical meteorological information, 1907-46** (10 in.). If the content of the responses sampled is any indication of the whole, this collection includes considerable information about life and conditions on the frontier. For example, John P. Finley, Col. U.S. Army, retired, (file no. 2), reported on the difficulties encountered when inspecting the mountain meteorological station at Pikes Peak, CO, and the base station at Colorado Springs in 1885. He also recounted the circumstances surrounding the death in 1887 of Gen. William B. Hazen, Chief of the Army Signal Corps and head of the weather service. Copies of two Professional Papers on tornadoes (nos. VII and XVI) that Finley wrote are among the publications described in 27.82. William W. Neifert (file no. 11) recalled in colorful detail his experiences on assignments in Arizona Territory when Geronimo surrendered in 1886; in Indian Territory at the time of the first "Oklahoma Run" in 1889; and in Texas.

## RECORDS OF SURFACE LAND OBSERVATIONS

**27.67** The records discussed in this section are primarily sources of scientific data, and the information they offer is somewhat limited in scope and chiefly statistical in nature (barometer and thermometer readings, data on wind direction and velocity, and cloud and general weather conditions). Obviously researchers who are interested in determining weather conditions for a given day or longer period of time will find these records very rewarding, but those who are more interested in general aspects of State and local history would do well to at least sample the records relating to their area of geographical interest. The remarks columns in some of the records often contain information that would enhance any historical study. In this respect, some of the earliest documents are the most interesting, and many of them are reproduced as part of National Archives microfilm publication T907, *Climatological Records of the Weather Bureau, 1819-1892*, discussed immediately below.

### General Observations

**27.68 Microfilm copies of surface land observations, 1819-92** (T907, 564 rolls, 30 ft.), cover all or parts of several series of records. Before the filming of microfilm publication T907 began, National Archives personnel integrated by State or Territory the four record series described below and arranged them in one sequence in the order in which they are discussed. After filming was completed, the original records were destroyed. The records for each State or Territory are arranged alphabetically by name of station, thereunder by type of record, and thereunder chronologically. The various documents are available for the locations and time periods shown in the Supplement under the heading "Consolidated List of Climatological Records." The series are identified in the Supplement by the designators indicated in the series descriptions. A very brief account of the nature of each series is given here, but a detailed analysis of the various reports submitted is given in Special List No. 1, *List of Climatological Records in the National Archives*.

1. **Monthly meteorological reports received by the Surgeon General's Office, 1819-59,** are designated "SG-1." The reports were submitted quarterly until 1843; reports originating after 1860 were turned over to the Signal Office and are included with the voluntary observers' reports described in item 4 below. The reports were designed to capture data on temperatures, wind, weather (general remarks), precipitation (beginning in 1836), and barometric obser-

vations (for certain stations beginning in 1840). In addition to meteorological observations, the first reports submitted frequently contained descriptive accounts of the physical, military, and medical topography of the posts.

2. **Monthly meteorological reports of voluntary observers received by the Smithsonian Institution, 1840-73**, are designated "SI." Some of these reports for periods in 1849, 1850, 1852, 1853, and 1858 were destroyed in a fire in 1865. The reports vary greatly in their content. In general, they were received from three main categories of observers who were classified according to the nature and completeness of the instruments they used.

a. First-class observers were equipped with a complete set of instruments, including thermometers, barometers, hygrometers or psychrometers, wind vanes, and rain gauges. They reported barometric, temperature, and hygrometric readings, data on precipitation, clouds, and wind direction and force. Until 1856 the remarks section called for comments on the weather, condition of crops, and the arrival and departures of birds. Thereafter, notes on "casual phenomena" give full particulars on thunderstorms, tornadoes, lightning, aurora borealis, meteors, shooting stars, and lunar halos; time of early and late frosts; depth of ground frozen; time of closing and opening of rivers, lakes, and canals; earthquakes; and data concerning crops, birds, and the like. The space for "Remarks" was frequently used for dissertations on meteorological theories, comments of a personal, political, or economic nature, and descriptions of instruments and their location.

b. Partially equipped observers reported on data collected periodically from thermometers and rain gauges, noting temperatures; duration and quantity of rain and snow; velocity, direction, and kinds of clouds; and the direction and force of winds. Observations on casual phenomena also were included.

c. Observers not equipped with instruments reported only visual observations of "the face of the sky" as to clearness, of the direction and estimated velocity of clouds and wind, and of the time and duration of precipitation and its estimated quantity.

3. The **monthly reports of regular stations of the Signal Office, 1870-91, and of the Weather Bureau, 1891-98**, are designated "Reg Sta." The number of stations maintained by the weather service changed continually. When it was inaugurated in 1870, 24 stations were in operation. By the following year this number had increased to 55 stations, and by June 30, 1890, there were 26 first order, 118 second order, and 34 third order stations. By 1892, shortly after the creation of the Weather Bureau, 172 first and second order stations were functioning. Only reports of first and second order stations are included in this series; reports of third order stations constitute a separate series (27.71). In general, the reports submitted by the first and second order stations recorded barometer and thermometer readings; mean relative humidity of the local observations; amount of rainfall or melted snow observed at the telegraphic observations; wind direction and velocity; average cloudiness; state of weather; rain-wind data; and summary and averages.

4. **Monthly reports of voluntary observers for the Signal Office and for the Weather Bureau, 1874-92**, are designated "VO." Included are monthly reports of Army surgeons stationed at military posts, 1860-92, a continuation of series SG-1 and SI. The Army medical observers continued to use forms issued by the Surgeon General's Office, but other voluntary observers used a great variety of forms, including, in addition to the Smithsonian Institution forms, forms of the Geological Survey, of State weather services and geological surveys, of railway weather services, and of other agencies. All of the forms called for temperature and precipitation data. Many different forms of the Signal Office and Weather Bureau were also used, and they were revised frequently. These reports were filmed only if they did not duplicate other records for a given locality.

**27.69** Also listed in Special List No. 1, but not filmed as part of microfilm publication T907, are **weekly meteorological records, 1870-81** (1,357 vols. and unbound records, 341 ft.). These records share the designation "Reg Sta," since they were submitted by the same stations of the Signal Office as the monthly reports (27.68.3) and are arranged alphabetically by name of State or Territory and thereunder alphabetically by name of locality. In general, the reports record barometer and thermometer readings; wind direction, showing velocity and pressure; amount and direction of the clouds; precipitation, showing duration and quantity of rain and snow falls; means of barometer and thermometer readings; changes in river (discontinued after a few years);

state and character of the weather; and remarks. The reports are available for the same locations and time periods as the monthly reports listed in the Supplement under the heading "Consolidated List of Climatological Records" and the designation "Reg Sta."

**27.70 Reports of sunset stations, 1878-85, 1888** (5 in.), are arranged alphabetically by State or Territory, thereunder by name of locality, and thereunder chronologically. These monthly reports were submitted from a special group of fewer than 30 stations that were maintained to take observations only at sunset. The sunset observations provide data on pressure, temperature, wind direction and force, cloudiness, precipitation, and the state of the weather. The report form also called for a prediction of the weather based on the character of the sunset and a comment on the validity of the prediction.

**27.71 Reports of observations at the third order stations, 1883-98** (4 ft.), are arranged alphabetically by name of State or Territory and thereunder alphabetically by name of station. These monthly reports are of observations made once a day by stations established primarily for climatological reasons. The data recorded includes daily maximum and minimum temperature, quantity of precipitation (time and duration after 1888), appearance of auroras, and wind and weather. The amount of data collected increased periodically, and by 1891 the reports covered such elements as the dates of light and killing frosts; the number of cloudless, partly cloudy, and cloudy days; and the depth of snowfalls.

**27.72 Daily meteorological observations made in U.S. cities, 1872, 1874-76** (3 vols., 5 ft.), in the morning, evening, and night are recorded on oversize printed forms bound in volumes covering the periods April-July 1872, February-August 1874, and September 1874-July 1876. The entries are arranged by day and thereunder alphabetically by name of city. The States, Territories, and cities represented in the 1872 volume include the following: California (San Diego, San Francisco); Colorado Territory (Denver); Iowa (Davenport, Keokuk); Kansas (Leavenworth); Louisiana (New Orleans, Shreveport); Minnesota (Duluth, St. Paul); Missouri (St. Louis); Montana Territory (Virginia City); Nebraska (Omaha); New Mexico Territory (Fort Benton); Oregon (Portland); Texas (Galveston); Utah Territory (Corinne); and Wyoming Territory (Cheyenne). By 1874 the printed list had been expanded to include entries for Fort Gibson, Indian Territory; Fort Sully, Dakota Territory, and Indianola, TX, but data for those sites appears to have been entered sporadically. The last two volumes include annotations for Dubuque, IA; Dodge City, KS; Pembina and Yankton, Dakota Territory; and Pikes Peak, CO. Weather-related information about other western communities is found in the series of **miscellaneous records relating to weather reports for Grand Turk Island, Bermuda, San Luis Obispo, and other U.S. cities, ca. 1876-81** (2 vols., 2 in.), which consists of two scrapbooks of newspaper clippings containing data on weather conditions at various foreign and domestic sites. Cities covered include Oakland, Sacramento, and San Luis Obispo in California; Monticello and Muscatine, IA; Lawrence, KS; New Orleans, LA; and Walla Walla, Washington Territory. Also included is general information about Travis County, TX, Louisiana, and Utah Territory; and data on rainfall in California and Arizona Territory, 1877-88. **Miscellaneous meteorological observations made in the United States, ca. 1821-81** (12 ft.), consist of oversize form reports covering sites in several States, including California, Kansas, Louisiana, Nebraska, and Texas.

**27.73 Records relating to daily meteorological observations, ca. 1859-1905** (106 vols., 8 ft.), consist of journals with entries arranged by name of locality. The data elements addressed include barometer, attached and open-air thermometers, clouds, wind, and state of weather. States, Territories, and localities represented include the following: Arizona Territory (Camp Eldorado, Fort Mojave, Fort Whipple); California (Camp Gaston in Humboldt County, Death Valley, Donner Pass, Drum Barracks, Fort Bidwell, Fort Humboldt, Hope Valley, Initial Point Camp on the Colorado River, Mount Diablo, Placerville, Point Conception, Red Bluff, Sacramento, Stockton, Yreka); Montana Territory (Coal Banks); Nevada Territory (Aurora, Austin); New Mexico Territory (Albuquerque); Oregon (Astoria, Forest Grove, Fort Dalles, Fort Umpqua); Utah Territory (Carson City, Strawberry Valley); and Washington Territory (Fort Vancouver). The Donner Pass volume for January-May 1867 includes a watercolor painting of a lunar halo recorded at 10 p.m. on March 19.

**27.74 Daily observations of meteorology at military posts [Meteorological Registers], 1819-1916** (574 vols., 144 ft.), are arranged alphabetically by name of State or Territory and thereunder by locality. Post surgeons recorded their observations in these registers and transcribed their reports (27.68.1, SG-1) from them. Pre-1860 data contained in the

registers are, in most cases, duplicated in the reports described above, while post-1860 data are duplicated in the series of voluntary observers' reports of the Signal Office and Weather Bureau (27.68.4, VO). As a rule, each register contains the observations of one post, but occasionally on the abandonment of a post, the register and instruments were sent to another post where they were used for subsequent observations. The registers are of five types--blank books, issued before 1843, and printed forms issued in 1843, 1855, 1868, and 1888--each of which is described in detail in Special List No. 1. The bulk of the registers are for the period 1850-1900, with relatively few volumes for other years. Relevant registers are available for the locations and time periods shown in the Supplement under the heading "Consolidated List of Climatological Records." The series is identified in the Supplement by the symbol "SG-2."

**27.75** Oversized forms were used to record **hourly observations made at equinoxes and solstices at military posts ["Hourly Meteorological Registers"], 1821-54** (1 ft.), which are arranged alphabetically by name of station. Readings were recorded about the 21st of March, June, September, and December of each year at posts in Arkansas, California, Indian Territory, Iowa, Kansas Territory, Louisiana, Minnesota Territory, Missouri, Nebraska Territory, New Mexico Territory, Oregon Territory, Texas, and Utah Territory. The locations and time periods for which records exist are shown in the Supplement. The forms cover barometer and thermometer (attached and detached) readings, sky and cloud observations, and wind measurements (velocity and direction).

**27.76** Entries in the bound **monthly summaries of meteorology at military posts, 1819-54, 1859-86** (12 vol., 3 ft.), are arranged chronologically and thereunder by name of post. Since the volumes are not uniform in size or appearance, the information they provide and the format of its presentation may vary somewhat from one volume to another. The volume for the period 1824-27 covers the following: name of the post and person reporting; temperature data (highest, lowest, and mean temperatures, hottest and coldest days); wind data (direction and number of days); and general weather (fair, cloudy, rain, snow, etc.).

**27.77** Separate **abstracts of reports of voluntary observers and of Army post surgeons, 1874-86** (3 vols., 3 in.), are arranged alphabetically by State or Territory and are thereunder filed together by month. The information provided by the abstracts varies, but those submitted by the voluntary observers are generally more detailed. The abstracts examined give the name of the station, barometer and thermometer readings, and data on rainfall, frost, snow, halos, hail, thunderstorms, and lightning. The surgeons reported thermometer, barometer, and hygrometer readings and data on rainfall and clouds. **Temperature and precipitation data from post hospitals and voluntary observers, 1880-86** (3 vols., 3 in.), are arranged alphabetically by name of State or Territory and thereunder by name of station. Included are entries for Dakota Territory and Indian Territory.

**27.78** Additional periodic reports are discussed below:

1. The chronologically arranged **"Daily Meteorological Bulletins" [Signal Service Meteorological Record], Jan.-June 1871** (2 vols., 4 in.), were issued by the Division of Telegrams and Reports for the Benefit of Commerce and were distributed free of charge via telegraph to newspapers for publication. The bulletins record observations made at 7:35 a.m. and 4:35 p.m. Data recorded include place of observation; height of barometer and change in pressure since last report; temperature and change in last 24 hours; relative humidity (percent); direction of wind, velocity (miles per hour), pressure of wind (pounds per square foot), and force of wind reduced to Beaufort scale (approximate); amount of cloud cover; rainfall since last report (inches and hundredths); and state of weather. The cities covered by the bulletins are listed alphabetically by name on printed forms, but some reports contain handwritten annotations for additional sites. Readings are included for the following States and Territories: California (San Diego, San Francisco); Iowa (Davenport); Kansas (Leavenworth); Louisiana (New Orleans); Minnesota (Duluth, St. Paul); Missouri (St. Louis); Montana Territory (Fort Benton); Nebraska (Omaha); New Mexico Territory (Santa Fe); Oregon (Portland); Texas (Galveston); Utah Territory (Corinne); and Wyoming Territory (Cheyenne).

2. Printed forms recording **monthly means totals and summaries of meteorological data, 1883-90** (2 vols., 5 in.), are arranged alphabetically by name of station. Each form covers two calendar years and provides information concerning the following: pressure; temperature; precipitation; wind (direction and velocity); number of foggy, cloudless, partly cloudy, and cloudy days; and the number of

days in which at least .01 inch or more precipitation fell.

3. **Original monthly meteorological reports of voluntary observers, 1899** (3 vols., 5 in.), cover temperature, precipitation, wind direction, cloud conditions, depth of snow, and dates of frost, hail, and sleet. The reports are arranged by State or Territory and thereunder by station. The volumes cover Alabama to Iowa, Kansas to New Mexico Territory, and New York to Wyoming.

4. **Monthly reports of Weather Bureau stations [Monthly Meteorological Report], 1905-7** (63 vols., 11 ft.), are arranged chronologically by year, thereunder alphabetically by name of station, and thereunder chronologically by month. The stations and years for which reports exist are shown in the Supplement.

5. Printed forms called **"Annual Summary of Meteorological Observations" [Meteorological Abstracts], 1877-87** (4 vols., 10 in.), submitted by voluntary observers, are arranged alphabetically by State or Territory, with relevant entries found in the volumes as indicated: Arizona Territory, Arkansas, California, Colorado, and Dakota Territory (vol. 1); Iowa, Kansas, Louisiana, Minnesota, Missouri, and Montana Territory (vol. 2); Nebraska, Nevada, and New Mexico Territory (vol. 3); Oregon, Texas, and Utah, Washington, and Wyoming Territories (vol. 4). The readings record pressure; temperatures (mean, maximum, minimum); mean relative humidity; total precipitation (rain and melted snow); total snowfall; and remarks. The period of coverage varies from station to station. Name indexes to the States, Territories, and stations, are inserted in volumes 2 to 4.

**27.79** Private **diaries and journals containing meteorological information, 1792-1889** (9 ft.), which were accumulated by the Smithsonian Institution, the Signal Office, and the Weather Bureau, are arranged numerically. Some items originated with private weather systems, such as those of States, railroads, boards of health, and city parks, while others came from private observers. Most of the journals and diaries are the originals, but copies made by the Smithsonian Institution are included. The meteorological data contained in the journals and diaries usually include thermometer readings, barometer readings, and data on winds, clouds, and precipitation. Many of the earlier diaries contain, in addition, notations on events of an economic, social, or political character. The materials collected by the Smithsonian Institution and the Signal Office were transferred to the Weather Bureau in 1891. Relevant documents held by the National Archives prior to 1942 are available for the locations and time periods shown in the Supplement under the heading "Consolidated List of Climatological Records." They are identified by the symbol "Pr."

**27.80** The items constituting the **"Miscellaneous Meteorological Material," 1848-73, listed in the *Annual Report* of the Smithsonian Institution for 1874** (11 ft.), are arranged according to a list called "Classified Record of Miscellaneous Meteorological Material Preserved in the Smithsonian Institution," which was published in the *Annual Report of the Board of Regents of the Smithsonian Institution Showing the Operations, Expenditures, and Condition of the Institution for the Year 1874.* Most of the items are records of observations describing single events or covering short periods of time, but a few journals and diaries cover longer time spans. The listed material generally consists of letters arranged under the following headings: Auroras, Instruments, Meteors, Rain, Wind, General Meteorology, and Local Meteorology, arranged by country. Items for the United States include general materials as well as observations made in most States and Territories. Found under all of the headings except Instruments are items pertaining to specific States or Territories, and they are listed in the Supplement. Pertinent general items are listed below:

General Meteorology:

Table of magnetic determinations observed in connection with survey of northwestern lakes.

G.C. Doran, Profile of route of Yellowstone expedition.

Capt. R.B. Marcy, Map of country upon Upper Red River.

Local Meteorology: United States

Capt. Henry Little, Meteorological notes during march of Colonel Morrison's command from Fort Gibson, [Indian Territory], to Big Timbers on the Upper Arkansas, [KS], June 22 to October 25, 1855.

Meteorological observations, northwestern boundary survey.

J.R. Gilliss, Meteorology on Central Pacific Railroad, 1867.

Telegraphic reports of weather at various points in the United States, September and October, 1856.

It should be noted that those items attributed to "Dakota" are shown in the Supplement on the lists for Nebraska and North and South Dakota; items for "Indian Territory" appear on the Oklahoma list. It should also be mentioned that not all of the items listed in the "Classified Record" are found in this collection; a copy of the "Classified Record," annotated to show the missing documents, is available as a finding aid.

**27.81** Also listed in the Supplement are relevant items found in **other miscellaneous meteorological material accumulated by the Smithsonian Institution, 1848-1891** (17 ft.). A few records in this series date from the period of Smithsonian involvement in meteorological activity prior to 1874. Most are reports of observations, but none is listed in the "Classified Record." The bulk of the series consists of notes, computations, tabulations, manuscripts, and galley-proofs relating to various Smithsonian meteorological publications, as well as some abstracts, indexes, lists, and registers prepared by the Smithsonian Assistant in Charge of Meteorology. The records are arranged by subject, and a finding aid, similar in format to the published "Classified Record," is available.

**27.82** Several studies issued by the Signal Service in its Professional Papers series are among the **miscellaneous publications of the Signal Service on climatic conditions, ca. 1871-92** (11 items, 5 in.). Included are the numbered papers listed below:

No. II, Isothermal Lines of the United States, 1871-1880 (1881).

No. VI, "The Reduction of Air Pressure to Sea-Level, at Elevated Stations West of the Mississippi River," by Henry A. Hazen, A.M. (1882).

No. VII, "Report on the Character of Six Hundred Tornadoes," by John P. Finley (1884).

No. XVI, "Tornado Studies for 1884," by John P. Finley (1885).

Also included are three issues of the "Daily Bulletin of Simultaneous Weather Reports with synopses, indications, and facts" for the months of February, April, and May, 1877; a copy of a Senate document, "The Climatic Conditions of Texas, Especially with Reference to Temperature and Rainfall" (S. Ex. Doc. 5, 52d Cong., 1st sess., 1892); and copies of two Senate documents bound as part of the volume labeled "Climate of Neb., Ore. & Wash. & Report of Rain-Fall of the Miss. Region," which is described in 27.93.

**27.83 Miscellaneous records relating to meteorological observations, 1872-1915** (5 vols., 2 ft.), include three relevant volumes. One volume contains observations made three times daily by personnel of the Yellowstone Park Division of the Geological Survey, 1886-87, documenting temperatures and data on wind and clouds at the park. A volume of monthly reports from the station at Pikes Peak, CO, provides data on pressure, temperatures, winds, and clouds for the period January to September 1894. The third volume records data for Leavenworth, KS, January to April 5, 1872, on the forms used to collect data on weather conditions in the cities (see 27.72). Some data for Kansas can be found in the **meteorological observations made under the direction of the Smithsonian Institution, ca. 1850-71** (3 ft.), which were recorded on oversize forms.

**27.84** Weather reports and weather-related news stories from various newspapers throughout the country make up the series of **newspaper meteorological reports, Sept. 1871-Feb. 1873** (1 vol., 2 in.), which are mounted in an oversize scrapbook. The clippings are arranged chronologically by date of article.

Records Concerned Solely With Thermometers and Temperature Readings

**27.85** Paperbound **reports of daily maximum and minimum temperatures, 1872-90"** (6 vols., 7 in.), are arranged roughly by State or Territory and thereunder alphabetically by station; the entries thereunder are arranged chronologically by year, month, and day. Included are readings for the following named locations: Arizona Territory (Fort Grant and Yuma); California (Eureka, Fresno, Keeler, Los Angeles, Red Bluff, San Diego, San Francisco, and Sacramento); Colorado (Colorado Springs, Denver, and Montrose); Idaho (Boise City); Nevada (Carson City, Pioche, Winnemucca); New Mexico Territory (Santa Fe); Oregon (Portland, Roseburg); Utah Territory (Frisco, Salt Lake City); Washington (Olympia, Spokane Falls, Tatoosh Island, Walla Walla); and Wyoming (Cheyenne, Fort Washakie). **Records of comparative temperature readings, 1873-84** (3 vols., 5 in.), were compiled on forms covering three-month periods and bound in volumes covering the months January through March, April

through June, and July through September. The entries, which are arranged alphabetically by name of station, record three readings per month (normal, sum, and mean normal). Before November 1, 1879, the readings were taken at 7:35 a.m., 4:35 p.m., and 11:00 p.m. Thereafter, they were taken at 7 a.m., 3 p.m., and 11 p.m.

**27.86** Bound **records of temperature readings, 1871-86** (1 vol., 3 in.), give for each station covered the mean temperature, the maximum and minimum temperatures, and the date of each. The entries are arranged by station and thereunder by year and month. The volume includes an alphabetical index to station names and two small supplemental indexes that are not alphabetically arranged. Index entries give the relevant page numbers, and most of them give the dates the stations were established. **Records of differences of daily mean temperatures, 1881-87** (2 vols., 6 in.), are arranged alphabetically by name of station in volumes labeled A-L and M-Y. Also arranged alphabetically by name of station is the oversize **record of daily and five-day mean temperature readings, ca. 1879-1903** (2 ft.), taken from self-registering thermometers.

**27.87** An incomplete set of **summary reports on thermometer exposure at stations, 1883** (1 vol., 3 in.), compiled by voluntary observers on circular form letters from W.B. Hazen, Chief Signal Officer, provide information about the location of the thermometers (height above ground, distance from nearest structure or tree) and types of exposure. Included are rough sketches of instrument shelters. The reports, arranged by State or Territory and thereunder by locality, are bound in a volume labeled A-K.

Records Relating to Precipitation and Water Resources

**27.88** Paperbound **reports on daily precipitation at weather service stations, 1870-90** (6 vols., 6 in.), are arranged roughly by State or Territory, thereunder alphabetically by station, and thereunder chronologically by year, month, and day. Included are readings for the following: Arizona Territory (Camp Apache, Fort Grant, Fort Thomas, Fort Verde, Prescott, Whipple Barracks, Yuma); Arkansas (Fort Smith, Little Rock); California (Eureka, Fresno, Keeler, Los Angeles, Red Bluff, Sacramento, San Diego, San Francisco); Colorado (Colorado Springs, Denver, Montrose, Pueblo); Idaho (Boise City); Kansas (Concordia, Dodge City, Fort Leavenworth, Topeka, Wichita); Louisiana (New Orleans, Shreveport); Missouri (St. Louis, Springfield); Nevada (Carson City, Pioche, Winnemucca); New Mexico Territory (Fort Stanton, Fort Wingate, Santa Fe); Oklahoma/Indian Territory (Fort Sill); Oregon (Portland, Roseburg); Texas (Abilene, Corpus Christi, Eagle Pass, El Paso, Fort Elliott, Fort Stockton, Galveston, Palestine, Rio Grande City, San Antonio); Utah Territory (Frisco, Salt Lake City); and Washington (Olympia, Spokane Falls, Walla Walla). The quantity of precipitation received at various stations is also documented in a **monthly record of rainfall including melted snow [Record of Rainfall Readings], 1871-84** (1 vol., 1 in.), which shows the number of inches received per month and the greatest amount in one day and the date. Entries are arranged alphabetically by name of station and thereunder chronologically by year and month.

**27.89** As a result of disastrous floods during the middle 1880's, a system of 43 special rainfall stations was established by the Signal Office on July 1, 1887, as an adjunct to the existing system of river stations. The stations, which were located at suitable points near the sources of the principal tributaries of the large rivers, were staffed by special observers selected from among the local inhabitants. Unbound **reports of special rainfall stations, 1887-88** (1 vol. and loose papers, 8 in.), are arranged alphabetically by name of State or Territory and thereunder alphabetically by name of station. Entries in the bound volume are arranged alphabetically by name of station. These monthly reports record daily observations on the amount of rain or of melted snow in inches and hundredths of inches, the depth of snow on the ground in inches, and statements as to whether or not the ground was frozen. The remarks columns contain information on all unusual occurrences, such as droughts and heavy rains, and a description of the river, if the station was located on one. The rainfall station reports (R) are available for the locations and time periods shown in the Supplement, under the heading "Consolidated List of Climatological Records." Represented in this series are Arizona Territory, Colorado, Iowa, Kansas, Minnesota, Montana Territory, Nebraska, New Mexico Territory, Oklahoma (Indian Territory), Oregon, Texas, Utah Territory, and Wyoming Territory.

**27.90 Miscellaneous records relating to storm data and studies, ca. 1884-99, 1927, 1944** (7 in.), consist of various manuscript narrative reports, charts, and graphs, arranged by type of report. In-

cluded are studies of kinds of storms for the period July 1894 through September 1895; abnormal storms for October through November 1895; heavy snow storms, 1895; storm tracks and types for the months of February, March, and April, 1894, 1895, and January, 1891, 1899. Also included is a study of the relation of wind force and velocity to areas of low pressure, based on data collected during the period 1891-93. Entries in a **diary of storms with estimated damage [Record of Storms], 1881-83** (1 vol., 3 in.), show the date and nature of various storms throughout the country, the injuries to persons, and the estimated damage to property. The entries are arranged chronologically. **Reports of thunderstorms, 1885** (1 vol., 3 in.), occurring during the months of July, August, and September show the time of thunder and precipitation, the amount of precipitation, the direction and velocity of wind, and the approximate intensity of the storm. The entries are arranged chronologically.

**27.91 Records of evaporation studies, 1907** (10 vols., 10 in.), consist of fieldbooks containing readings taken at towers 1 through 5 at the Reno, NV, reservoir. Unbound forms containing **observations of rain and snowfall in California, Colorado, and New Mexico, 1889-90** (5 in.), are arranged by State and Territory, thereunder alphabetically by site of observations, and thereunder chronologically.

**27.92 Records relating to water resources services, 1909-37** (3 vols., 5 in.), consist of form reports titled "Description of Location, Topography, etc., of Mountain Stations Established in the Interest of the Water Resources Service of the Weather Bureau." The stations were set up to secure data about the precipitation and depth of snow on the mountains and at the heads of small tributary streams in order to determine the amount of water available from those sources during the warm season. The reports identify the station by name, county, State or Territory, and pertinent tributary and river system; indicate the best means of communication; and provide information on local forest conditions and the surrounding terrain, including the name of the mountain range and degree of slope. Also included in the report is information about the observer, including address, birthplace, legal residence, level of education, experience, and salary. The reports are arranged by State or Territory and thereunder alphabetically by name of station. The States and Territories represented in this series are Arizona, California, and Colorado (vol. 1); Idaho, Montana, Nevada, New Mexico, and North Dakota (vol. 2); and Oregon, South Dakota, Utah, Washington, and Wyoming (vol. 3).

**27.93** ***Snowfall Bulletins*, 1897-1904** (1 vol., 1 in.), were issued weekly during the winter months of December, January, February, and March for 12 mountain States and Territories of the West. They reported in detail the depths and condition of snow at high levels, with special reference to the prospective supply of water for irrigation during the following spring and summer. These publications are arranged chronologically. Also relevant to this guide are the four volumes listed below which are found among the **miscellaneous publications relating to climatological data, rain-fall, and flood control, 1860-1953** (10 in.):

1. "River Stages 1860 to 1889, inc." This paper bound volume gives readings taken at various sites along the Mississippi and Missouri Rivers as well as along several others, including the Arkansas, Ouachita, St. Francis, and White Rivers in Arkansas; Bayou Boeuf, and the Atchafalaya and Red Rivers in Louisiana; and the Gasconade River in Missouri. Also included in the volume is a "Description of River Gauges, Bench-Marks, Danger-Lines, and Flood-Marks at U.S. Weather Bureau Stations in the Mississippi Valley, except the Ohio Valley."

2. P.C. Day, "The Daily, Monthly, and Annual Normals of Precipitation in the United States, Based on the 50-Year Period, 1878 to 1927," *Monthly Weather Review* [Supplement No. 34]. The entries in this study, which was published in 1930, are arranged alphabetically by station location.

3. "Climate of Neb., Ore. & Wash. & Report of Rain-Fall of the Miss. Region." This volume includes three Senate Executive Documents:

a . "Report of Rain-Fall in Washington Territory, Oregon, California, Idaho, Nevada, Utah, Arizona, Colorado, Wyoming, New Mexico, Indian Territory and Texas, for from Two to Forty Years" (S. Ex. Doc. 91, 50th Cong., 1st sess., 1889).

b. "Letter of the Chief Signal Officer on the Climate of Oregon and Washington Territory" (S. Ex. Doc. 282, 50th Cong., 1st sess., 1889).

c. "Climate of Nebraska particularly in reference to the Temperature and Rain-fall and Their Influence upon the Agricultural Interests of the State" (S. Ex. Doc. 115, 51st Cong., 1st sess., 1890).

4. Ford A. Carpenter, *The Climate and Weather of San Diego, California* (San Diego Chamber of Commerce, 1913).

Records of Wind Observations

**27.94** Measurements of wind velocity and direction date back to establishment of the Government weather reporting service, when post surgeons began recording their weather observations. Records discussed here relate almost exclusively to such measurements.

1. The form reports constituting the bound **"Army Meteorological Register," 1850** (1 vol., 3 in.), were adapted to record wind measurements for various localities for the period 1850-54. The readings, usually for six stations per page, are arranged by month and by wind direction.

2. Data on surface current (direction) and motion of clouds (direction) are found in **abstracts of observations on winds, June 1866-December 1896** (1 vol., 2 in.). Entries are arranged chronologically by year, thereunder by month, thereunder alphabetically by place of observation (State, or Territory), and thereunder by station.

3. Entries in a volume called **"Wind Records," 1872-79** (1 vol., 1 in.), arranged alphabetically by name of station and thereunder chronologically by year and month, provide data on wind direction and velocity (maximum miles per hour, direction, and date) and the total number of miles per month and the prevailing direction.

**27.95** Records documenting hourly wind movement and direction that are described below are available for the locations and time periods shown in the Supplement.

1. **Records of hourly wind movement, 1872-1904** (87 vols., 18 ft.), show the prevailing wind movement as recorded by self-registering instruments. The records are arranged alphabetically by station except for the period 1884-88, when they are arranged alphabetically by State and thereunder by locality.

2. **Records of hourly wind direction, 1891-1904** (33 vols., 6 ft.), show the prevailing direction of the wind for each hour of the day. Continuous records of wind velocity extend back to the establishment of the Government weather reporting service. The records are arranged chronologically and thereunder alphabetically by locality.

The records in these two series that relate to New Orleans for the periods 1881-1904 and 1891-1904, respectively, are reproduced on roll 8 of Microfilm Publication M1379.

**27.96 Reports of local wind storms, 1887** (2 vols., 6 in.), consist of a mixture of letters and form reports filed with the Tornado Division of the Signal Office, and are bound in rough chronological order. The reports generally provide information on the date, time, and character of the storms and the shape of tornado clouds; and observations on temperature, hail, rain, electrical activity, general destruction of property, and injuries to people and animals.

Records of Barometric Observations

**27.97** Records relating primarily to the measurement of atmospheric pressure include the following:

1. **Barometrical registers, 1855-68, 1874-77** (2 vols., 3 in.), record pressure readings taken at 7 a.m., 2 p.m., and 9 p.m. Entries are arranged chronologically by year, thereunder by month, and thereunder by station or locality. The volume for the period July 1855 to December 1868 contains readings from military posts, showing high and low pressure and range, and highest and lowest temperatures recorded by attached thermometers. Beginning in 1865, a section was added to the entries for each locality to record "Reduction of the above observations to 32° Fahrenheit." Starting in March 1868, all observations were recorded at the reduction level and the thermometer readings were dropped. Entries in the volume covering July 1874 to January 1877 give maximum, minimum, mean, and range readings at the reduction level.

2. Readings of **barometric pressure at sea level [Record of Barometric Pressure], 1872-80** (1 vol., 2 in.), give mean measurement, maximum measurement and date, and minimum measurement and date. Entries are arranged alphabetically by name of station and thereunder chronologically by year and month. Included in the volume is an alphabetical index to station names and two small supplemental indexes that are not alphabetically arranged. Index entries give the relevant page numbers, and most also give the dates the stations were established.

3. **Records of comparative barometer readings, 1873-84** (3 vols., 5 in.), were compiled on forms covering three-month periods and bound in volumes covering the months January through March, April through June, and July through September. The entries, which are arranged alphabetically by

name of station, record three readings per month (normal, sum, and mean normal). Before November 1, 1879, the readings were taken at 7:35 a.m., 4:35 p.m., and 11:00 p.m. Thereafter, they were taken at 7 a.m., 3 p.m., and 11 p.m.

**27.98** Psychrometers measure atmospheric humidity. **Psychrometrical registers, 1874-87** (2 vols., 3 in.), provide readings taken at 7 a.m., 2 p.m., and 9 p.m. The entries are arranged by month and thereunder by name of station.

Records Relating to Observations in Select Areas

**27.99** The work of surveying and marking the northwest land boundary from the crest of the Rocky Mountains to the Pacific coast set by the treaty of June 15, 1846, between the United States and Great Britain was undertaken by a joint U.S.-British Commission established in 1857. Although most records of the Commission are in Record Group 76, Records of Boundary and Claims Commissions and Arbitrations, some fieldbooks containing weather data apparently were contributed to the Smithsonian Institution's collection of weather-related records. These consist of **meteorological observations of the northwest made by the U.S. boundary survey, ca. 1857-61** (34 vols., 10 in.), at various locations in the vicinity of the 49th parallel and the coast. Included are readings recorded at Semiahmoo Bay, Colville Depot, Chiloweyuck Depot, and Sinyakwaleen Depot. One of the fieldbooks contains meteorological notes taken by George Gibbs, the ethnologist and natural historian, who was a member of the surveying party. A fieldbook containing observations made at Chelemta Depot includes a sketch of a partially obscured sun, with the caption "The sun partially eclipsed by mosquitoes, July 10th 1860." Five of the fieldbooks record barometrical altitudes at various sites.

**27.100** Reports initiated specifically to assist farmers include the cotton region reports (CR) and corn and wheat region reports (W). These reports are available for the locations and time periods shown in the Supplement, under the heading "Consolidated List of Climatological Records."

1. The monthly **reports of observations in the cotton regions, 1883-1902** (16 ft.), submitted to the Signal Office, 1883-June 1891, and to the Weather Bureau, July 1891-1902, record meteorological data collected in the 11 States constituting the "Cotton Region," including Arkansas, Louisiana, Oklahoma, and Texas. The region was divided into districts, each consisting of a group of substations and a district center. In 1882, district stations were established in several southern cities, including Galveston, TX, Little Rock, AR, and New Orleans, LA. At the district stations, telegraphic reports were assimilated and the means of data were distributed to all weather stations on the telegraph circuit for dissemination to the public by means of press releases and bulletins. The reports from the New Orleans district office, which supervised 13 substations in 1885, are reproduced on roll 8 of National Archives Microfilm Publication M1379. At the substations, observers (chiefly railroad and telegraph company workers through 1890, voluntary weather observers thereafter) made daily observations of maximum and minimum temperatures and rainfall and noted severe storms and unusual phenomena, and sums and means. However, they submitted reports only monthly; these were reviewed at district centers and transmitted to the Office of the Chief Signal Officer. Because the observers were required to submit reports only for the months from April to October, the winter months are not generally well represented before 1890. After 1890 the voluntary observers often submitted reports for the entire year. The reports are arranged alphabetically by name of State, thereunder alphabetically by locality, and thereunder chronologically by date of report.

2. Arranged in a like manner are the **reports of observers in the corn and wheat regions, 1896-1902** (4 ft.), which are similar in content to those for the cotton region described above. The observers reported the maximum and minimum temperature and the range of temperature; the time, duration, and quantity of rain; the state of the weather; and the usual summary data. In general, reports were not made during the winter months. Among the 14 States and Territories covered by the corn and wheat region system were Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Oklahoma Territory, and South Dakota.

Also reflecting the interests of farmers in all agricultural areas are the **reports on the time of planting and harvesting of crops, 1888-93** (1 vol., 1 in.). Entries in these reports are arranged by State or Territory and thereunder by district or county. They show the types of crops planted in each locality, and the dates of planting and harvesting.

**27.101** Two series record meteorological observations made in connection with railroad routes.

**Observations made by employees of the Northern Pacific Railroad, 1873-74** (1 in.), are arranged chronologically and consist of a monthly meteorological record of readings registered at Bismarck, Dakota Territory, for the period January through September 1874 and at Brainard, MN, for the period February 1873 through December 1874. The reports show day, date, time of observation, temperature, wind direction and velocity, cloud conditions, rain or snowfall, and remarks. **Records of observations made at stations of the Central and Southern Pacific Railroad, 1877-88** (3 vols., 5 in.), consist of chronologically arranged monthly summaries of readings from stations in Arizona Territory, California, Nevada, New Mexico Territory, Texas, and Utah Territory. The reports provide data on temperatures (high, low, and monthly mean), precipitation (rain, snow, inches), and wind direction. The bulk of the readings are for stations that were located in California.

**27.102 Meteorological observations of the Coast Survey, 1853-90** (87 vols., 4 ft.), are arranged according to a system of geographic numbers used by the Coast Survey and thereunder chronologically. Most of these survey notebooks, which were created by tidal observers or by magnetic observers, were "loaned" to the Smithsonian by the Department of the Treasury. A few unnumbered notebooks were sent by Coast Survey observers directly to the Smithsonian. The daily observations recorded in the notebooks include readings for the direction and force of the wind, barometric pressure, temperature, and general weather conditions. Available as a finding aid is an alphabetical list of geographic locations that are covered by the records, showing the years of recorded observations for each location. The States and locations represented in this series include California (Benicia, 1850-54; Fort Point, 1860-77; Monterey, 1854; Presidio, 1853, 1858; San Diego, 1853-72; San Francisco, 1853-57, 1882; and San Luis Obispo, 1854); Louisiana (Calcasien, 1861; Lost Island, 1860; and South West Pass, 1852-53, 1860-61); Nebraska (Omaha, 1859); Oregon (Astoria, 1854-69); and Texas (Galveston, 1851-53).

Additional Records

**27.103** Fieldbooks make up the **miscellaneous records of solar radiation observations, ca. 1894-1914** (24 vols., 2 ft.), and contain, among other things, skylight polarization observations for Flagstaff and Phoenix, Arizona Territory, and Santa Fe, New Mexico Territory, in 1910, and for various other sites in New Mexico Territory, 1912-13. **Records of solar and sky radiation measurement, ca. 1908-41** (174 ft.), consist of graphs that are arranged alphabetically by locality. Included are records from the following: Albuquerque, NM; Fresno, CA; Lincoln, NE; and Twin Falls, ID.

**27.104 Reports of observations taken during the transit of Halley's Comet, 1910** (3 in.), consist largely of letters arranged in rough alphabetical order by name of locality. A cursory examination disclosed reports submitted from Corpus Christi, TX; Davenport, IA; Duluth, MN; Eureka, CA; Little Rock, AR; St. Paul, MN; Salt Lake City, UT; San Jose, CA; Santa Fe, NM; Valentine, NE; and Winnemucca, NV.

RECORDS OF MARINE OBSERVATIONS

**27.105 Records of cautionary signals, 1871-99** (29 vols., 5 ft.), document special warnings of storms and hurricanes issued by the Signal Service and the Weather Bureau, primarily for the benefit of marine interests. These warnings have been displayed by means of storm flags and lanterns at many points on the Atlantic, Pacific, and Gulf coasts and along the Great Lakes. Weekly records of the display of the warnings reveal the time of hoisting and lowering the signal and of the beginning and ending of the storm, the direction and velocity of the wind, the damage resulting from the storm, and the benefits resulting from the display of signals. The records are arranged by locality. Included are volumes for three sites in Texas: Corpus Christi, 1884-88; Galveston, 1875-88; and Indianola, 1875-86.

**27.106 Miscellaneous meteorological records of the Hydrographic Office, 1877-81** (5 in.), consist of form reports filed from ships anchored in various foreign and U.S. ports, including New Orleans, LA, and Mare Island, CA. The reports give the date, data for winds (mean direction, mean force, particular nature), barometer and thermometer readings, and remarks on the state of the weather. They are arranged chronologically and thereunder alphabetically by name of ship. **Miscellaneous marine meteorological records, ca. 1874-1933** (1 ft.), include monthly meteorological registers of readings taken by personnel at the U.S. naval hospital at Mare Island, CA, 1874-1877.

## CARTOGRAPHIC AND PHOTOGRAPHIC RECORDS

### Cartographic Records

**27.107** Several series of records containing maps, charts, and graphs are filed with the textual materials. Among them are the following:

1. National weather maps are a feature of the printed **"Daily Bulletin of Simultaneous Weather Reports," Sept.-Dec. 1877** (4 vols., 1 ft.), which are bound in monthly segments. The complete title of these 1881 publications is "Daily Bulletin of Simultaneous Weather Reports taken at 7:35 a.m., 4:35 p.m., and 11 p.m. (Washington mean time) with the Synopses, Indications, and Facts." In addition to the maps, the textual portion of the bulletins provides an alphabetical list of the observation stations and gives barometer and thermometer readings, relative humidity (percent), wind (direction and velocity), clouds (quantity and direction), rainfall in preceding 8 hours, and state of weather (clear, foggy, fair, threatening, etc.). Also included is a narrative section giving summaries, synopses, indications, wind and weather data, and general remarks as to verification of overall data.

2. **The tri-daily meteorological record, Oct. 1878** (11 in.), consists of printed maps, published in 1884, recording information on the following: Barometer, Thermometer, Wind, Clouds, Precipitation, State of the Weather (clear, fair, cloudy), and stations throughout the United States.

3. Data for several months in 1878 and 1879 are captured in **War Department weather maps, 1871-91** (11 ft.), which include oversize printed and numbered maps for various months in 1878 and 1879. These bear the following titles: I, Tracks of Centers of Areas of Low Barometer; II, Isobars, Isotherms, and Prevailing Winds; and III, Precipitation Chart.

4. Also available are **daily weather maps with Washington, Boston, Chicago, New Orleans, Louisville, Denver, Portland, OR, and San Francisco forecasts, January 1-June 30, 1906** (1 vol., 3 in.).

5. **Graphs showing long-term trends in weather conditions, 1870-83** (6 in.), arranged alphabetically by name of locality, record by month the character of weather conditions at each locality, giving temperatures; number of clear, cloudy, and rainy days; and wind observations.

**27.108** Filed apart from the textual records are the maps and related materials described below that were created or collected by the Signal Corps and by various divisions and offices of the Weather Bureau. It should be noted that the item counts provided are for all States, not just those west of the Mississippi.

1. Signal Corps observations (32,964 items): Included in this group are base maps annotated by the Western Union Telegraph Co., 1870 (13 items), to show surface weather conditions; manuscript and published Signal Service daily weather maps of the United States, 1872-86 (26,000 items); tri-daily weather maps, 1874-88 (1,035 items); wind, cloud, rain, precipitation, and barometric pressure materials, 1871-91 (171 items); storm tracks, 1864-86 (240 items); and maps received from field offices, 1871-91 (195 items).

2. Climatological Division (1,481 items): Included are maps appearing in Bureau publications of *Weather Crop Bulletin* (150 items), showing temperature and rainfall departures by weeks during the planting, growing, and harvesting seasons, 1891-95; *Climate and Crop Bulletin*, 1896-1907 (384 items); *National Monthly Weather Bulletin*, 1908-13 (224 items), and snow and ice bulletins, 1893-1919 (448 items); snow charts, 1892-96 (69 items); and U.S. climatic charts, 1870-1901 (26 items). Also included are materials documenting dates for seeding and harvesting, ca. 1893 (15 items), and the frost and growing season, 1911 (5 items).

3. Forecast Division (63,401 items): Included in this group are manuscript and published daily U.S. surface weather maps, 1891-1941 (60,000 items); and wet bulb temperature readings, 1895-97 (1,640 items).

4. Division of Hydrologic Services and Predecessors (87 items): Included is an 1897 map of the lower Mississippi River Valley showing inundated areas (1 item).

5. Office of Meteorological Research (70,587 items): Included in this group are historical synoptic maps for the Northern Hemisphere compiled 1941-65 using data from 1899-1965, showing daily weather (57,916 items), and time variations, sunrises, and sunsets (48 items). Many of these maps were prepared in cooperation with the Army, Navy, Air Force, and certain colleges and universities.

6. General Cartographic Records (3,928 items): This group of materials that cannot be assigned to specific administrative units includes studies of

temperature, cold waves, frost, precipitation, and atmospheric weight, 1873-1942 (1,160 items); storms and hurricanes, 1876-1956 (180 items); and Ohio River and Mississippi River floods, 1912-37 (71 items). Also included are materials prepared for special projects, such as an *Atlas of American Agriculture* and the *National Atlas*, 1911-60 (18 items), and instructional publications relating to weather mapping, 1892-1950 (24 items).

Photographic Records

**27.109** Among the separately maintained photographic records are lantern slides, 1875-1945 (S) used by staff members of the Bureau for lectures, reports on research, and presentations at conferences. The subjects pictured include storm and damage scenes related to hurricanes, tornadoes, floods, heavy frosts, hail and lightning, as well as photographs of charts, maps and graphs, instruments and apparatus, buildings, and portraits of persons of importance in the field of meteorology. Flood scenes of towns along the Mississippi River are arranged alphabetically by name of location. Some slides show the damage in Galveston, TX, following hurricanes in 1900 and 1915, that destroyed much of the city. Photographs used for publicity purposes, 1888-1944 (PP) show trees, forests, and clouds, and weather conditions such as snowstorms, tornadoes, lightning, and hail. Also available are photographs covering meteorological instruments and apparatus, storm and damage scenes, cloud formations, atmospheric occurrences, persons, and Bureau buildings and stations, 1875-45 (G); Bureau projects and activities, 1880-1910 (GO); and natural disasters, 1900-31 (ND); and a photograph of delegates to the Weather Bureau Convention in Omaha, NE, 1898 (OP, 1 image).

## PERSONNEL RECORDS

**27.110** Relatively detailed information about some members of the military who served at the weather observation stations can be found in two series. The **officers record book, ca. 1872-88** (1 vol., 1 in.), is a chronological record of assignments and other job-related matters for 16 second lieutenants who served in the Signal Corps. The entries include information regarding the deaths of some of the officers. The officers covered by the record are identified in a table of contents. Similar information regarding enlisted men is provided in the **record of enlisted men, 1881, 1884-90** (2 vols., 5 in.), which provides summaries of individuals' service, giving dates of enlistment, assignments, and discharges if applicable. The volumes contain alphabetical name indexes. Following the index in volume 1 is a list of deceased soldiers, giving name, rank, date of death, place of death, and cause.

**27.111** Among the **miscellaneous personnel records of the Weather Bureau and its predecessor, 1866-1958** (19 ft.), is a bound "Roster of Weather Station Personnel and Duties," August 1894, which gives names and titles, number of hours on duty (weekdays, Sundays, and holidays), nature of duties in brief, and a statement of duties required and performed. Entries are arranged alphabetically by station name. Other pertinent records in this collection include chronologically arranged monthly rolls of enlisted men, 1875-86, rosters of employees, 1872-1914, and published rosters of commissioned Weather Bureau personnel, 1909-39, as well as records regarding Signal Office personnel, ca. 1866-91, and a collection of resignations, discharges and death notices, 1894-1911, arranged alphabetically by name.

**27.112** Two additional series are relevant. **Proceedings of the Board of Officers for Examination of Enlisted Men, 1880-86** (1 vol., 1 in.), document tests given at Fort Whipple, VA, to determine the qualifications of potential meteorological observers. The candidates were tested on such subjects as recitations and observatory work, tactics, the Myer's Manual of Signals, international signals, electricity, meteorology, instructions to observers, penmanship, and lectures and graded on military appearance and drill. An alphabetical index called "**Names of Applicants for Enlistment, 1888 To ___**" (1 vol., ¼ in.), lists the names of men who applied to serve in the Signal Service. Entries consist of names and document numbers referring to letters in the various correspondence series.

## RECORDS HELD BY REGIONAL ARCHIVES

**27.113** Several regional archives hold records of the Weather Bureau, but the quantity of pre-1913 materials in their custody is relatively small, in some cases only a single series. For example, the National Archives--Great Lakes Region, in Chicago, IL, holds one volume relevant to this guide, namely a **field-book of hygrometer measurements taken in St.**

**Vincent, MN, March 1-April 18, 1883** (1 in.), and the National Archives--Pacific Northwest Region, Seattle, WA, holds a small quantity of fiscal records and letters received that constitute the **miscellaneous records relating to the Weather Bureau Office in Lewiston, ID, ca. 1906-7** (8 in.). Holdings of other regional archives are discussed below.

**27.114** Considerably more extensive than the records mentioned above are the weather-related holdings of the National Archives--Central Plains Region, in Kansas City, MO, which has custody of records, 1867-1979, of the Central Regional Weather Bureau Office (the former District Forecast Center), the National Severe Storms Project Office, and weather stations. The materials document climatological observations in Colorado, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin, and Wyoming. Of particular interest in terms of this guide are undated weather station history files; weather forecasts, flood reports, and records of river stages, 1867-1956; weather maps; and **records of climatological observations, 1891-1979** (78 ft.), submitted by weather stations in Kansas. The latter series, arranged alphabetically by name of station and thereunder chronologically, consists of reports from cooperative observers, voluntary observers, and river stations; records of climatological and hydrological observations; and monthly summaries. The reports, which are on preprinted forms, generally give the reporting date, name of the reporting station, and weather data, including continuously monitored wind direction and velocity, precipitation levels, temperature, barometric pressure, sunshine, daily river gauge readings, remarks and special observations, and the names of the observer and the examiner at the weather center. Also available are bound **monthly and annual summaries of average precipitation in Missouri, 1856-1904** (1 vol., 2 in.), which are arranged alphabetically by name of locality.

**27.115** Four series of bound volumes are held by the National Archives--Southwest Region, Fort Worth, TX. These consist of the **letters sent from Fort Concho, TX, Fort Gibson, Indian Territory, and Grierson Springs, TX, 1873-85** (6 vols., 6 in.); **registers of letters received at Fort Concho, TX, Fort Gibson, Indian Territory, and Grierson Springs, TX, 1873-87** (7 vols., 7 in.); **station journals for Fort Concho and Grierson Springs, TX, and Fort Gibson, Indian Territory, 1877-83** (9 vols., 2 ft.); and **records of meteorological observations taken at Brownsville, TX, 1889-92** (1 vol., 1 in.). The entries in each volume are arranged chronologically.

**27.116** The National Archives--Rocky Mountain Region, Denver, CO, has in its custody a set of bound **records of observations made at Pikes Peak and Colorado Springs, CO, 1882-83** (5 vols., 3 in.). The entries in each volume are arranged chronologically. Available as well are **daily meteorological observations in New Mexico, 1876-80** (1 vol. and 24 booklets, 6 in.), and **correspondence relating to meteorological observations at Fort Yates, Bismarck, Dakota Territory, 1879-89** (4 vols., 4 in.), consisting of three volumes of letters sent and one volume of letters received.

# SUPPLEMENT

## Select Series of Records Listed by State/Territory and Thereunder by Locality

This supplement provides State and locality listings for nine series of records, although not all of the series are found for each State. A brief summary of each series is given here, and cross-references are provided to those sections of the chapter containing more detailed information about the individual series. The numbers assigned to the series discussed below (i.e., 27.S1, 27.S2) are for indexing purposes only; the numbers are not given in the State/Territory lists themselves. Since the localities shown under the separate series entries within each list are arranged alphabetically, references to the sites are not included in the general index to this volume.

## Descriptions of Records Covered in the State/Territory Lists

### Climatological Records

**27.S1 Consolidated List of Climatological Records, 1810-1911**. Includes references to records, 1819-92, reproduced in National Archives Microfilm Publication T907 (564 Rolls). *See* 27.68.

Entries are adapted from Special List No. 1, *List of Climatological Records in the National Archives* (1942). Records are listed by States or Territories, thereunder by localities, and under each locality chronologically by series. When the special list was compiled, names of localities within States were checked against the *United States Official Postal Guide* (1937 ed.). For localities not listed in the *Postal Guide*, the county in which they were located as indicated by the records is shown in parentheses. Other information contained in the records that will help to identify their place of origin is given in quotation marks within parentheses. For the locations of U.S. Army posts, Francis B. Heitman, *Historical Register and Dictionary of the United States Army*, vol. 2 (Washington, 1903), was used. Records are listed under the name last used for a locality; thus, records for Camp Brown, WY, will be found under the last name of the post, Fort Washakie. Localities are likewise listed under the State in which they were finally incorporated rather than under the Territory in which they originated; for example, records for Fort Garland, New Mexico Territory, are listed under Colorado instead of under New Mexico Territory.

The dates indicated for each series are inclusive and do not take account of the innumerable gaps that exist. Gaps of several consecutive months, however, are noted.

Explanation of Symbols Used to Designate Types of Records in This Consolidated Series

Records reproduced as part of T907:

**SG-1** Monthly (quarterly until 1843) reports received by the Surgeon General's Office, 1819-59 (continued in series **VO**). *See* 27.68.1.

**SI** Monthly reports of voluntary observers for the Smithsonian Institution, 1843-73 (continued in series **VO**). *See* 27.68.2.

**Reg Sta** Monthly (1870-91) reports of regular stations of the Signal Office and of the Weather Bureau, 1891-98. *See* 27.68.3.

**VO** Monthly reports of voluntary observers for the Signal Office, 1874-91, and for the Weather Bureau, 1891-92, and monthly reports of Army surgeons stationed at military posts, 1860-92 (continues series **SG-1** and **SI**). *See* 27.68.4.

Records not reproduced in T907:

**SG-2** Bound registers, 1819-1911, kept by Army surgeons stationed at military posts, from which reports in series **SG-1** were transcribed. *See* 27.74.

**Reg Sta** Weekly (1870-81) reports of regular stations of the Signal Office and of the Weather Bureau, 1891-98 (*see* 27.69) and monthly reports after 1892.

**CR** Monthly reports of observers in the cotton region received by the Signal Office, 1883-91, and by the Weather Bureau, 1891-1902. *See* 27.100.1.

**W** Monthly reports of observers in the corn and wheat region received by the Weather Bureau, 1896-1902. *See* 27.100.2.

**R** Monthly reports of special rainfall stations received by the Signal Office, 1888. *See* 27.89.

**Pr** Private journals, diaries, and reports, 1792-1889, accumulated by the Smithsonian Institution, the Signal Office, and the Weather Bureau. The designator refers to items that were held by the National Archives prior to 1942. *See* 27.79.

**27.S2 Daily Journals and Abstracts, 1870-1907** (829 vols., 179 ft.)

All stations for meteorological observations were required to keep daily journals. These were narrative meteorological records of weather phenomena not easily tabulated. Included in the journal entries were narrative descriptions of wind, precipitation, river level, clouds, storms, and effects of inclement weather. The entries also dealt with the station's instruments, personnel, procedures, cautionary signals, and related matters. Monthly abstracts were made of these daily records and forwarded to the Washington Office of the U.S. Signal Service. The entries were first made on paper with no form number, but in 1881 an index was added on Form 140. This contained a printed list of all topics likely to be mentioned in the journals. Form 140 was renumbered in 1891 as Form 1014 but contained no important revisions. The title "Abstract of Daily Journal" was also changed to "Daily Journal," but the data submitted remained the same. An important change occurred in 1904, when recordkeeping procedures were revised at all the stations. Entries in the daily journals after 1904 were made only for important events rather than for daily happenings. An interesting feature of the journals was the method of inserting marginal notes in red ink to facilitate reference. These notes were inserted on each page of the journal for each prominent subject, and the subjects were indexed monthly; after 1896 they were also indexed annually. The journals and abstracts are arranged in three segments: alphabetically by locality for the period 1870-87; alphabetically by State or Territory, 1888-90; and chronologically by year, thereunder alphabetically by locality, after 1890. The records received from the New Orleans, LA, station for the period November 1870 through December 1907 are reproduced as part of National Archives Microfilm Publication M1379, *Selected Documents From the Records of the Weather Bureau Relating to New Orleans, 1870-1912* (rolls 1-6), produced in cooperation with The Historic New Orleans Collection. *See* 27.51-27.54.

**27.S3 Records of Hourly Wind Movement, 1872-1904** (87 vols., 18 ft.)

These records show the prevailing wind movement as recorded by self-registering instruments. The readings were transcribed to Forms 165 and 1022, which are arranged alphabetically by station except for the period 1884-88; for this period they are arranged alphabetically by State, thereunder by locality. The records relating to New Orleans are reproduced as part of National Archives Microfilm Publication M1379 (roll 8). *See* 27.95.1.

**27.S4 Records of Hourly Wind Direction, 1891-1904** (33 vols., 6 ft.)

Readings recorded on Form 1021 show the prevailing direction of the wind for each hour of the day. Continuous records of wind velocity extend back to the establishment of the Government weather reporting service. The forms are arranged chronologically, thereunder alphabetically by locality. The records relating to New Orleans, LA, are reproduced in National Archives Microfilm Publication M1379 (roll 8). *See* 27.95.2.

**27.S5 Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1821-54** (1 ft.)

These records, arranged alphabetically by name of station, include information submitted from posts in the following States or Territories: Arkansas, California, Iowa, Kansas, Louisiana, Minnesota, Missouri, Nebraska, New Mexico, Oklahoma (Indian Territory), Oregon, Texas, and Utah. *See* 27.75.

**27.S6 Monthly Reports of Weather Bureau Stations [Monthly Meteorological Report], 1905-7** (63 vols., 11 ft.)

These narrative reports are arranged by year, thereunder alphabetically by name of station, and thereunder chronologically by month. Most reports include an index, and index terms appear in the margins. *See* 27.78.4.

**27.S7 "Miscellaneous Meteorological Material" Listed in the *Annual Report* of the Smithsonian Institution for 1874, 1848-73** (11 ft.)

Most of the items in this series are records of observations describing single events or covering short periods of time, but a few journals and diaries cover longer periods. The documents listed in the *Annual Report* are arranged under the following headings: Auroras, Instruments, Meteors, Rain; Wind; General Meteorology; and Local Meteorology, arranged by country. Items for the United States include general materials as well as observations made in the following States and/or Territories: Arkansas, California, Colorado, Dakota (see Nebraska, and North and South Dakota), Indian Territory (see Oklahoma), Iowa, Kansas, Louisiana, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, Oregon, Texas, Utah, and Wyoming. *See* 27.80.

**27.S8 Other Miscellaneous Meteorological Material Accumulated by the Smithsonian Institution, 1848-1891** (17 ft.)

The bulk of this series consists of notes, computations, tabulations, manuscripts, and galleyproofs relating to various Smithsonian meteorological publications, as well as some abstracts, indexes, lists, and registers prepared by the Smithsonian Assistant in Charge of Meteorology. The records are arranged by subject under headings similar to those used in the 1874 *Annual Report*. Items are listed for the following States: California, Colorado, Iowa, Kansas, Louisiana, Minnesota, Missouri, Nebraska, Oregon, Texas, and Utah. *See* 27.81.

## Operational Records

**27.S9 Station Inspection Reports, 1871-1912** (21 ft.)

Weather stations were periodically inspected by U.S. Army officers, then by Weather Bureau civilian inspectors. These records reflect the subjects of such inspections, including the station's address, floor plan, equipment, books, records and personnel; and the bulletins, reports, maps, and other information it distributed. The intervals between inspections were irregular. The records are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Reports for the period 1890-1912 are not bound. The reports for the weather station at New Orleans, LA, are reproduced as part of National Archives Microfilm Publication M1379 (roll 8). *See* 27.55.

## Climatological Records

**Consolidated List of Climatological Records, 1851-1903** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 8-18).

American Flag: **VO**, 1890
American Ranch: **VO**, 1889
Antelope Valley (Yavapai County): **VO**, 1888-92
Aquia (Yuma County): **VO**, 1890
Arizona Canal Company's Dam: **VO**, 1889, 1892
Ash Canyon (Cochise County; *see also* Mount Huachuca): **VO**, 1888-91
Ash Creek (Yavapai County): **VO**, 1889-90
Ash Springs (Cochise County): **VO**, 1889-90
Bangharts (Yavapai County): **VO**, 1888-90; **R**, 1888
Bisbee: **VO**, 1889-92
Bowie Station (*see* Teviston)
Buckeye: **VO**, 1890-92
Burke's: **Reg Sta**, 1877-80 (2d order)
Calabasas: **VO**, 1889-92
Camp Beale's Spring (43 miles E. of Fort Mojave): **VO**, 1873-74
Camp Colorado (on Colorado River): **SG-2**, **VO**, 1868-71
Camp Crittenden (at site of Fort Buchanan): **SG-2**, **VO**, 1868-73
Camp Date Creek (formerly Camp Skull Valley and Camp McPherson; *see also* Skull Valley): **SI**, 1869; **SG-2**, **VO**, 1867-73
Camp Eldorado (on Colorado River): **VO**, 1867
Camp Goodwin (Fort Goodwin prior to 1867; Prima County): **SG-2**, **VO**, 1864-70
Camp Hualpai (formerly Camp Toll Gate): **SG-2**, **VO**, 1869-73; **VO**, 1870-73
Camp J.A. Rucker (White River Canyon): **SG-2**, 1879
Camp La Paz: **VO**, 1874-75
Camp Lincoln (*see* Fort Verde)
Camp Lowell (*see* Corilla Station and Fort Lowell)
Camp McDowell (*see* Fort McDowell)
Camp McPherson (*see* Camp Date Creek)
Camp Mogollen (*see* Fort Apache)
Camp Moore (*see* Fort Buchanan)
Camp Rawlins (27 miles NW. of Prescott): **SG-2**, 1870
Camp Reno (Tonto Valley): **SG-2**, 1868-70; **VO**, 1868-70
Camp Skull Valley (*see* Camp Date Creek and Skull Valley)
Camp Thomas (*see* Fort Apache)
Camp Toll Gate (*see* Camp Hualpai)
Camp Wallen ("upper San Pedro"): **VO**, 1866-67, 1869
Camp Willow Grove: **SG-2**, **VO**, 1867-69
Cedar Springs (Graham County): **VO**, 1888-89
Chiracahua Mountain (Cochise County): **VO**, 1889-92
Chloride: **VO**, 1889-91
Clifton: **VO**, 1889-90, 1892
Cooleys Springs (Apache County): **VO**, 1889-90
Corilla Station (Camp Lowell; *see also* Fort Lowell): **Reg Sta**, 1875-77 (2d order)
Cottonwood: **VO**, 1889-91
Crittenden: **VO**, 1889-92
Dos Cabezos: **VO**, 1889-92
Dragoon: **VO**, 1889-92
Dripping Springs: **VO**, 1890
Dudleyville: **VO**, 1889-92
Duncan: **VO**, 1889
Eagle Pass (*also* labeled "Graham", "Curtis"; near Camp Thomas): **VO**, 1888-92
Fairbank ("Grand Central Mill"): **VO**, 1889-92
Farley's Camp (Yavapai County): **VO**, 1890-92
Flagstaff: **VO**, 1888-92
Florence: **VO**, 1889-92; **Reg Sta**, 1875-82 (2d order)
Fort Apache (formerly Camp Mogollen and

Camp Thomas): **VO**, 1870 (Camp Mogollen); 1870 (Camp Thomas); 1871-83, 1889-93; **Reg Sta**, 1878-88 (2d order); 1888-91 (3d order)
Fort Bowie: **SG-2**, **VO**, 1867-83, 1889-94; **Reg Sta**, 1883-91 (3d order)
Fort Breckenridge (later Fort Stanford): **VO**, 1860-61
Fort Buchanan (formerly Camp Moore): **SG-1**, 1856-57 (Camp Moore); **SG-1**, 1857-59; **VO**, 1860-61
Fort Defiance: **SG-1**, 1851-59; **VO**, 1860-61
Fort Goodwin (*see* Camp Goodwin)
Fort Grant: **SG-2**, **VO**, 1865-1903; **Reg Sta**, 1877-91
Fort Huachuca (Cochise County): **VO**, 1866, 1888-93
Fort Lowell (7 miles NE. of Tucson; Camp Lowell prior to 1880; *see also* Corilla Station): **SG-2**, **VO**, 1866-91
Fort McDowell (Camp McDowell prior to 1879): **SG-2**, **VO**, 1866-90; **Reg Sta**, 1883-90 (3d order)
Fort Mojave: **SG-1**, 1859; **SG-2**, 1863-92; **VO**, 1860-92 (with gaps)
Fort Thomas: **Reg Sta**, 1880-87 (2d order), 1887-91 (3d order)
Fort Verde (formerly Camp Lincoln): **SG-2**, **VO**, 1868-90; **Reg Sta**, 1875-90 (2d order)
Fort West: **VO**, 1863
Fort Whipple (*see* Whipple Barracks)
Gila Bend: **VO**, 1889-92
Gillette: **VO**, 1889-90
Globe: **VO**, 1888-89
Grand Central Mill (*see* Fairbank)
Holbrook: **VO**, 1887-92; **Reg Sta**, 1890-91 (3d order)
Lochiel (Pinal County): **VO**, 1888-92
Maricopa: **VO**, 1891; **Reg Sta**, 1875-78 (2d order), 1883-87 (3d order)
Mayer: **VO**, 1889
Mesa: **VO**, 1889
Mount Huachuca (Cochise County; *see also* Ash Canyon): **VO**, 1888-92
Natural Bridge (Gila County): **VO**, 1890-92
Navajo Springs: **VO**, 1891-92
New River (Maricopa County): **VO**, 1889-92
Nogales: **VO**, 1892
Oracle: **VO**, 1891-92
Oro (3 miles above Clifton): **VO**, 1889-91
Payson: **VO**, 1889-92
Peach Springs: **VO**, 1891
Peoria: **VO**, 1889-92
Phoenix: **VO**, 1890-92; **Reg Sta**, 1876-81 (2d order), 1882-90 (3d order)
Pinedale ("Pineapple"): **VO**, 1889
Prescott (*see* Whipple Barracks)
Prescott Junction: **VO**, 1888-89
Prues Ranch (Cochise County): **VO**, 1889-90
Rancho Del Pueblo (Maricopa County): **VO**, 1891-92
Red Rock: **VO**, 1889-92
Reymert (Pinal County): **VO**, 1891-92
Russellville: **VO**, 1891
Rye (Gila County): **VO**, 1892
Sackses Ranch (Cochise County): **VO**, 1889-90
St. Johns: **VO**, 1889-92
St. Paul Island: **VO**, 1869-70
San Carlos: **SG-2**, 1890-97; **VO**, 1888-99; **Reg Sta**, 1882-91 (3d order)
San Simon: **VO**, 1892
Show Low (Apache County): **VO**, 1888-92
Signal: **VO**, 1889-92
Silver King: **VO**, 1889-90
Simmons: **VO**, 1889-91
Skull Valley (*see also* Camp Date Creek): **VO**, 1867
Springerville: **VO**, 1890-91
Stanton: **VO**, 1889-90
Stanwix: **Reg Sta**, 1875-77
Strawberry: **VO**, 1889-92
Suligman: **VO**, 1889
Tempe: **VO**, 1889-92
Teviston (or Bowie Station): **VO**, 1888-92
Tip Top: **VO**, 1889-91
Tombstone: **VO**, 1889-92
Total Wreck: **VO**, 1889-90
Tres Alamos: **VO**, 1889-90
Tubac: **VO**, 1867-68

Tuba City: **VO**, 1889
Tucson (*see also* Fort Lowell): **VO**, 1884-92; **Reg Sta**, 1875-83, 1891-92 (2d Order)
Volunteer Spring: **VO**, 1889-90
Walnut Grove (Yavapai County): **VO**, 1889-90, 1892
Walnut Ranch (Cochise County): **VO**, 1889-92
Whipple Barracks (Prescott): **SG-2**, **VO**, 1865-98; **SI**, 1865; **Reg Sta**, 1876-90 (2d order)
Wickenburg: **Reg Sta**, 1875-82 (2d order), 1883-86 (3d order)
Wilgus: **VO**, 1890-92
Willcox: **Reg Sta**, 1883-91 (3d order)
Williams: **VO**, 1888-90
Willow Springs: **VO**, 1888-90
Winslow: **VO**, 1888-89, 1892
Wood Cañon: **VO**, 1889-92
Woodruff: **VO**, 1889-92
Yuma: **VO**, 1890; **Reg Sta**, 1875-92 (2d order)

**Daily Journals and Abstracts, 1875-1907.**

Apache, Fort (*see also* Fort Apache): 1891
Bowie, Fort (*see also* Fort Bowie): 1891
Burke's: 1877-80
Camp Lowell: 1875-77
Camp Thomas (*see also* Fort Thomas): 1880-87
Camp Verde (*see also* Fort Verde): 1882-87
Flagstaff: 1898-1907
Florence: 1875-82
Fort Apache: 1878-90
Fort Bowie: 1879-90
Fort Grant (*see also* Grant, Fort): 1878-90
Fort McDowell: 1883-90
Fort Thomas (*see also* Camp Thomas and Thomas, Fort): 1888-90
Fort Verde (*see also* Camp Verde): 1875-90
Grant, Fort: 1891
Holbrook: 1890-91
Maricopa: 1875-87
Phoenix: 1876-87, 1890, 1895-1907
Prescott (*see also* Whipple Barracks): 1875-87
San Carlos: 1881-91
Stanwix: 1875-77
Thomas, Fort: 1891
Tucson: 1875-83, 1891-95
Verde (*see* Camp Verde and Fort Verde)
Whipple Barracks (Prescott): 1888-90
Wickenburg: 1875-86
Willcox: 1883-91
Yuma: 1875-1907

**Records of Hourly Wind Movement, 1881-1904.**

Apache, Fort (*see* Fort Apache)
Flagstaff: 1904
Fort Apache: 1883-88
Fort Grant (*see also* Grant, Fort): 1881-88
Fort Thomas: 1885-87
Grant, Fort: 1889-91
Phoenix: 1895-1904
Prescott (*see also* Whipple Barracks): 1883-87
Tucson: 1891-95
Whipple Barracks: 1887-90
Yuma: 1881-97

**Records of Hourly Wind Direction, 1892-1904.**

Flagstaff: 1904
Yuma: 1892-97

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Flagstaff: 1905, 1906, 1907
Phoenix: 1905, 1906, 1907
Yuma: 1905, 1906, 1907

## Operational Records

**Station Inspection Reports, 1877-1911.** Reports are arranged alphabetically by name of station with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Apache, Fort: 1877-80 (3)
Apache Pass (Fort Bowie): 1877-89 (3)
Ash Fork: 1885-87 (3)
Bowie, Fort: 1884-88 (8)
Burke's: 1878-79 (12)
Corilla Station (Fort Lowell): 1878-80 (25)
Florence: 1877-81 (36)
Flagstaff: 1901-8
Goodwin (Fort Thomas): 1878-80 (37)
Grant Fort: 1877-88 (39)
McDowell, Fort: 1884-88 (53)
Maricopa: 1877-87 (54)
Melvin Station: 1877-79 (56)
Phoenix: 1877-88 (76); 1901-11
Prescott: 1877-88 (75)
Rawlins: 1888 (80)
San Carlos: 1884-88 (84)
Stanwix: 1877 (88)
Thomas, Fort: 1884-88 (94)
Tucson: 1877-81 (94)
Verde, Fort: 1879-88 (98)
Wickenburg: 1877-85 (101)
Willcox: 1884-88 (101)
Yuma: 1877-88 (103); 1893-1908

## Climatological Records

**Consolidated List of Climatological Records, 1821-1902** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 19-24).

Arkadelphia: **SI**, 1859-60
Arkansas City: **VO**, 1891; **CR**, 1883-88
Bee Branch: **VO**, 1892
Bentonville: **SI**, 1859-60
Black Rock: **VO**, 1891-92
Brinkley: **VO**, 1891; **CR**, 1883-1902
Brownsville (Prairie County): **SI**, 1859-61
Buck Horn (Independence County): **SI**, 1859
Camden: **SI**, 1855; **VO**, 1891-92
Clarksville: **SI**, 1871-72
Clear Lake (Mississippi County): **VO**, 1885
Conway: **VO**, 1890-92
Corning: **VO**, 1892
Dallas (Polk County): **VO**, 1891-92
De Queen: **CR**, 1902
De Valls Bluff: **VO**, 1891; **CR**, 1883-91
Durham: **VO**, 1875-76
El Dorado: **VO**, 1891-92
Eureka Springs: **VO**, 1887-88
Fayetteville: **SI**, 1870-72; **VO**, 1881, 1883-84, 1891-92; **Reg Sta**, 1878-79 (voluntary)
Flippin's Barrens (*see* Yellville)
Forrest City: **SI**, 1872-73; **VO**, 1889-91; **CR**, 1886-1902
Fort Smith: **SG-1**, 1821-24, 1838-50, 1852-61; **SG-2**, 1870-71; **SI**, 1867; **CR**, 1883-88; **Reg Sta**, 1882-92 (2d order)
Gaine's Landing (Chicot County): **VO**, 1891-92
Gainesville (Greene County): **SI**, 1859
Greengrove (Conway County): **SI**, 1860
Harrisburg: **VO**, 1890-92
Helena: **SI**, 1867-73; **VO**, 1874, 1890-91; **CR**, 1884-1902
Hope: **VO**, 1891-92
Hot Springs: **VO**, 1875-96
Izard: **VO**, 1892
Jacksonport: **SI**, 1859-60
Judsonia: **VO**, 1878
Keesee's Ferry (*see* Lead Hill)
Kensett: **CR**, 1883-87
Lake Village: **CR**, 1902
Lead Hill ("Keesee's Ferry"): **VO**, 1881, 1883-92 (fragmentary data)
Little Rock (*also* Little Rock Barracks): **SG-1**, 1839-40; **SG-2**, 1864-65, 1869-83, 1888-90; **SI**, 1849; **VO**, 1867, 1873, 1889; **CR**, 1883-88; **Reg Sta**, 1879-92 (2d order)
Lonoke: **VO**, 1890-92
Madding (Jefferson County): **VO**, 1892
Madison: **CR**, 1883-85
Magnolia: **CR**, 1884-86
Malvern: **VO**, 1891; **CR**, 1883-1902
Marshall: **VO**, 1892
Mineral Springs (4 miles N. of): **SI**, 1870-73
Monticello: **VO**, 1876-77, 1891; **CR**, 1883-91
Mountain Home (Marion County): **SI**, 1860-61
Mount Ida: **VO**, 1872-73, 1875-86
Mount Nebo: **VO**, 1890-92
New Gascony ("Corner Store"): **VO**, 1891-92
Newport: **VO**, 1891; **CR**, 1884-1902
Osceola: **VO**, 1890-92
Ozark: **VO**, 1891-92
Ozone: **VO**, 1890-92
Paraclifta (Sevier County): **VO**, 1876
Paragould: **VO**, 1891-92
Perryville: **SI**, 1856, 1859-61
Pine Bluff: **VO**, 1890-91; **CR**, 1884-1902
Pocahontas (Randolph County): **SI**, 1871-72
Prescott: **CR**, 1883-1902
Rogers: **VO**, 1891-92
Russellville: **VO**, 1890-91; **CR**, 1883-1902
Searcy: **VO**, 1892
Springfield: **VO**, 1883-84
Springhill (Hempstead County): **SI**, 1859-60
Stuttgart: **VO**, 1890-92
Texarkana: **VO**, 1890-91; **CR**, 1883-1902

Waldron: **SI**, 1859-60
Walnut Ridge: **CR**, 1883
Warm Springs: **VO**, 1892
Warren: **CR**, 1895-1902
Washington: **SG-2**, 1867-69; **SI**, 1859-61, 1871-72; **VO**, 1867, 1891-92
Winslow: **VO**, 1889-92
Yellville ("Flippin's Barrens"): **SI**, 1857, 1859-60

**Daily Journals and Abstracts, 1879-1907.**

Bentonville: 1906-7
Fort Smith: 1882-1907
Little Rock: 1879-1907

**Records of Hourly Wind Movement, 1881-1904.**

Fort Smith: 1883-1904
Little Rock: 1881-1904

**Records of Hourly Wind Direction, 1894-1904.**

Little Rock: 1894-1904

**Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1843-55.**

Fort Smith: 1843-50, 1852-55

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Bentonville: 1906, 1907
Fort Smith: 1905, 1906, 1907
Little Rock: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Local Meteorology--Arkansas:

Mount Ida: G. Whittington, Abstract of meteorological observations, May, November, 1874.

## Operational Records

**Station Inspection Reports, 1878-1910.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Bentonville: 1907-10
Fort Smith: 1884-88 (36); 1891-1910
Little Rock: 1878-88 (50); 1893-1910

## Climatological Records

**Consolidated List of Climatological Records, 1847-1893** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 25-62).

Agnew (State Insane Asylum): **VO**, 1891-92
Alcatraz Island: **SG-2**, 1860, 1874-92; **VO**, 1860-92
Aloha (Ignacia Valley): **VO**, 1889-91
Alvarado: **VO**, 1891-92
American Hill (near Grass Valley): **VO**, 1889
Anderson: **VO**, 1886-92
Angel Island (Camp Reynolds): **SI-2**, **VO**, 1867-91
Arcata: **VO**, 1886-92
Arch Beach (Orange County): **VO**, 1889-90
Auburn: **SI**, 1859-60
Bakersfield (near): **VO**, 1891-92
Banning (*see also* San Gorgonia): **VO**, 1888-89
Barstow: **VO**, 1888-92
Batavia (Solano County): **VO**, 1885-86
Benicia Barracks: **SG-1**, 1849-59; **SG-2**, **VO**, 1870-92
Berkeley: **VO**, 1886-92
Biggs: **VO**, 1892
Borden (Fresno County): **VO**, 1885-87
Cahta (Mendocino County): **SI**, 1869-71
Camp Anderson ("near Sutter City"; Sacramento): **SG-1**, 1849
Camp Babbitt (*see also* Visalia): **VO**, 1863-66
Camp Cady: **VO**, 1868-71
Camp Far West (15 miles from Marysville): **SG-1**, 1859
Camp Fitzgerald: **VO**, 1861
Camp Independence (Owen's Valley): **SG-2**, **VO**, 1862-63; **VO**, 1865-77
Camp Lincoln: **SG-2**, **VO**, 1863, 1866-69
Camp Reynolds (*see* Angel Island)
Camp Stanford (*see also* Stockton County): **SG-2**, **VO**, 1863
Camp Union (Sacramento): **VO**, 1863-65
Camp Wright: **VO**, 1864-75
Campo: **Reg Sta**, 1875-82 (2d order)
Camptonville: **VO**, 1886-87
Capay (*see* Madison)
Cape Mendocino: **Reg Sta**, 1882-86 (2d order)
Catalina: **VO**, 1889
Centerville: **VO**, 1886-91
Central Point (Merced County): **VO**, 1886
Chico: **VO**, 1869-73
Chino: **VO**, 1892
Christmas Prairie (Humboldt County): **VO**, 1884-87
Citrus (Inyo County): **VO**, 1892
Claremont (Pomona College): **VO**, 1891-92
Clayton: **SI**, 1870
Cloverdale: **VO**, 1876-77, 1887-88, 1892
Colegrove (5 miles WNW. of Los Angeles): **VO**, 1884-91
College City: **VO**, 1884-87
Collegeville: **VO**, 1887-88
Colusa: **VO**, 1891-92
Conn Valley Creek (Napa County): **VO**, 1886-87
Copperopolis: **VO**, 1886-88
Crafton (San Bernardino County): **VO**, 1874, 1882
Crescent City: **SI**, 1859-60; **VO**, 1886-92
Cucamonga (*see also* Deer Park): **VO**, 1885-86
Davisville (Briggs Vineyard): **VO**, 1892
Deer Park (6 miles N. of Cucamonga): **VO**, 1887
Denverton (Solano County): **VO**, 1886-88
Downey: **VO**, 1886-89
Downieville: **SI**, 1859-60
Drum Barracks (near Los Angeles): **SG-2**, 1864-71
Drytown: **VO**, 1891-92
Duarte: **VO**, 1892
Earlham (Orange County): **VO**, 1887
East Pasadena (*see* Pasadena)

East Yucaipa (*see* Yucaipa)
Edmonton (Plumas County): **VO**, 1892
El Cajon: **VO**, 1875-77
Elk Grove: **VO**, 1892
El Monte (Los Angeles County): **SI**, 1872-73; **VO**, 1873-77
Elsinore: **VO**, 1886-89
Erie (San Benito County): **VO**, 1885-86
Eureka: **Reg Sta**, 1887-92 (2d order)
Evergreen (Santa Clara County): **VO**, 1886-92
Fall Brook ("Oakwood"): **VO**, 1884-88, 1892
Ferndale: **VO**, 1889-90
Florin: **VO**, 1892
Folsom City: **SI**, 1861; **VO**, 1888-92
Fonts Springs (Colusa County): **VO**, 1885-88, 1892
Forestville: **VO**, 1891-92
Fort Bidwell: **SG-2**, **VO**, 1863-64, 1866-93; **Reg Sta**, 1884-85 (3d order), 1885-88 (2d order)
Fort Bragg: **SG-2**, **VO**, 1860-64; **SI**, 1871
Fort Crook (Shasta County): **SG-1**, 1857-59; **SG-2**, 1857-69; **VO**, 1860-69
Fort Gaston (Hoopa Valley): **SG-2**, 1876-92; **VO**, 1861-92
Fort Humboldt (Humboldt Bay): **SG-1**, 1854-59; **VO**, 1860-66
Fort Jones (Scotts Valley): **SG-1**, 1853-58
Fort Mason (San Francisco): **SG-2**, 1891-92; **VO**, 1882-92
Fort Miller (Fresno County): **SG-1**, 1851-58; **VO**, 1863-64
Fort Point (Golden Gate, San Francisco): **VO**, 1865-68
Fort Reading (near Trinidad): **SG-1**, 1852-54
Fort Ross: **VO**, 1892
Fort Tejon (head of San Joaquin Valley): **SG-1**, 1856-59; **SG-2**, **VO**, 1860-61, 1863-64
Fort Ter Wa: **SG-2**, **VO**, 1859-61
Fresno (*see also* Fort Miller): **VO**, 1877-78 ("Central California Colony"); **Reg Sta**, 1887-92 (2d order)
Fresno County ("S.J. & K.R.C. & I. Company's Dam"): **VO**, 1886
Furnace Creek: **Reg Sta**, 1891 (2d order)
Georgetown: **VO**, 1873, 1878, 1883 (monthly summaries), 1886-1892
Glendora: **VO**, 1892
Grand View (Los Angeles County): **VO**, 1886-87
Grass Valley (*see also* American Hill): **VO**, 1886-92
Gridley: **VO**, 1892
Guadaloupe: **VO**, 1885-87
Hanford: **VO**, 1888-89
Healdsburg: **VO**, 1878
Hollister (5 miles E. of): **VO**, 1886
Honcut: **SI**, 1858
Hopkins (*see* Summit Valley)
Hyde Ranch: **VO**, 1892
Hydesville: **VO**, 1883-92
Independence: **VO**, 1892
Indian Valley: **SI**, 1870-73
Indio: **VO**, 1887
Iowa Hill: **VO**, 1888-92
Jackson (*see also* Kennedy Gold Mine): **VO**, 1891-92 (mostly monthly summaries)
Jolon: **VO**, 1883-86 (monthly precipitation), 1887-92
Julian: **VO**, 1875-76, 1889-92
Keeler: **Reg Sta**, 1885-92 (2d order)
Kennedy Gold Mine (1 mile from Jackson): **VO**, 1892
Kinneyloa (Los Angeles County): **VO**, 1881
Kono-Tayee (near Lakeport): **VO**, 1892-93
La Grange (Stanislaus County): **SI**, 1873; **VO**, 1887-92
Laguna Mountain (near Emery, San Diego County): **VO**, 1884-86
Laguna Ranches: **VO**, 1883-84
Lakeport (*see* Kono-Tayee)
Langworth (Stanislaus County): **VO**, 1886-87
Laytonville: **VO**, 1886 (monthly precipitation)
Lemoore: **VO**, 1892
Lewis Valley ("Lewis Creek"): **VO**, 1886-90
Lick Observatory ("Mount Hamilton"): **VO**, 1888-92
Linden: **VO**, 1886-88

Little Hot Springs (Modoc County): **VO**, 1885-87
Little Stoney (Colusa County): **VO**, 1885-86
Lodi: **VO**, 1891-92
Lompoc: **VO**, 1879-80
Loomis: **VO**, 1889-90
Los Alamos: **VO**, 1888-89
Los Angeles (*see also* Colegrove and Drum Barracks): **SG-1**, 1847 ("El Pueblo do Los Angeles"), 1847-48; **VO**, 1886; **Reg Sta**, 1877-92 (2d order)
Los Banos: **VO**, 1886-90
Los Gatos: **VO**, 1885-92
Lugonia (San Bernardino County): **VO**, 1886-88
Madera: **VO**, 1886-87
Madison ("between Madison and Capay"): **VO**, 1887
Malakoff Mine: **VO**, 1886-87
Mare Island (near Vallejo): **SI**, 1868 (Naval Hospital), 1869-73; **VO**, 1878
Markleeville: **VO**, 1889-90
Marsh Ranch (Contra Costa County): **SI**, 1867-68
Martinez: **SI**, 1860
Marysville: **SI**, 1858-59, 1861-63; **VO**, 1891
Meadow Valley: **SI**, 1860-66
Mendocino City: **SI**, 1871-72; **VO**, 1886-90
Middletown (Lake County): **VO**, 1886-87, 1892
Milton (North Hill Vineyard): **VO**, 1890-92
Modena: **VO**, 1886-87
Modesto: **VO**, 1887, 1892
Mokelumne Hill: **SI**, 1859-61; **VO**, 1892
Monterey (Monterey Barracks): **SG-1**, 1847-52; **SG-2**, 1865; **SI**, 1859-60, 1863-72; **VO**, 1865, 1887
Mountain View: **VO**, 1891-92
Mount Hamilton (*see* Lick Observatory)
Mullans (1½ mile S. of Woodland): **VO**, 1890-92
Murphys: **SI**, 1868-69
Murrieta: **VO**, 1885-86
Napa: **VO**, 1891-92
National City: **SI**, 1872-73
Needles: **VO**, 1888-92
Nevada City: **SI**, 1865; **VO**, 1892
Newcastle: **VO**, 1891-92
New San Diego: **SG-2**, 1870-71; **VO**, 1860-66
Nicolaus: **VO**, 1885-89, 1891-92
Niles: **VO**, 1891-92
Nordhoff (Ventura County): **VO**, 1886-89, 1891-92
Oakland: **SI**, 1873, 1875-92
Oakwood Ranch (San Diego): **VO**, 1876-83
Oleta (Amador County): **VO**, 1891-92
Ontario: **VO**, 1886-87
Orange: **VO**, 1885-86
Orangevale (Sacramento County): **VO**, 1891-92
Orleans: **VO**, 1885-87
Oroville: **VO**, 1885-89
Otay Mesa (Mexican line; San Diego County): **VO**, 1884-85 (precipitation summary), 1886-87
Palermo: **VO**, 1891-92
Palmdale: **VO**, 1889
Paradise: **SI**, 1869
Pasadena ("E. Pasadena"): **VO**, 1887-90, 1892
Petaluma (Sonoma County): **VO**, 1886
Pine Valley: **VO**, 1875-76
Placerville: **VO**, 1886-88, 1890-92
Pleasanton: **VO**, 1892
Point Lobos: **VO**, 1883, 1892
Point Reyes Light: **Reg Sta**, 1889-98 (3d order)
Point San Jose (Marin County): **SG-2**, **VO**, 1865-91
Potter Valley: **VO**, 1886-87
Poway: **VO**, 1878-88, 1892
Presidio San Francisco: **SG-1**, 1847-48, 1850-59; **SG-2**, 1852-92
Princeton: **VO**, 1878-87
Rancho de Jurupa (San Bernardino County): **SG-1**, 1852-54; **SG-2**, 1853-54
Rancho Del Chino (San Bernardino): **SG-1**, 1851-52
Red Bluff: **Reg Sta**, 1877-92 (2d order)
Redding: **VO**, 1891-92
Red Hill Ranch (*see* Upper Lake)
Redlands: **VO**, 1892
Retaluma: **VO**, 1886

Rialto: **VO**, 1892
Rio Vista: **VO**, 1881-82
Riverside ("Arlington Heights"): **VO**, 1886-92
Rodeo de Las Argus (Los Angeles County): **VO**, 1883-84
Ross Valley (*see also* San Rafael): **VO**, 1884-86
Sacramento (*see also* Camp Anderson and Camp Union): **SI**, 1856-67; **VO**, 1863, 1877-79, 1882-92; **Reg Sta**, 1877-92 (2d order)
St. Helena: **VO**, 1879-81, 1891-92
Salinas City: **SI**, 1873; **VO**, 1872-92
San Ardo (Monterey County): **VO**, 1891-92
San Benito: **SI**, 1862-63, 1867
San Bernardino: **SG-2**, 1858; **VO**, 1889, 1892
San Buena Ventura (Ventura): **VO**, 1878-86 (with gaps), 1891-92
San Diego: **SG-1**, 1849-59; **SG-2**, **VO**, 1889-92; **SI**, 1871-72; **Reg Sta**, 1871-92 (1st order)
San Francisco (*see also* Fort Mason and Fort Point): **SI**, 1856-59, 1861-68; **Pr**: 1861-63; **Reg Sta**, 1871-92 (1st order)
Sanger: **VO**, 1892
San Gorgonia (*see also* Banning): **VO**, 1875-82, 1887
San Jacinto: **VO**, 1887, 1892
San Jose: **VO**, 1874-76, 1886, 1892
San Luis Obispo (*see also* Steeles): **VO**, 1887-89, 1892; **Reg Sta**, 1885-86 (2d order)
San Luis Rey Mission: **SG-1**, 1849-51
San Miguel Island: **VO**, 1886
San Rafael (*see also* Ross Valley): **VO**, 1886
Santa Barbara: **SI**, 1864; **VO**, 1864, 1880-83, 1885-92 (newspaper clippings)
Santa Catalina Island: **SG-2**, 1864; **VO**, 1864
Santa Clara: **SI**, 1859, 1861; **VO**, 1886-92
Santa Cruz: **SI**, 1873; **VO**, 1874-78, 1890-92
Santa Maria: **VO**, 1885-92
Santa Monica: **VO**, 1885-87
Santa Rosa: **SI**, 1873; **VO**, 1874, 1885
Santa Rosa Ranch: **VO**, 1877
Saticoy: **VO**, 1891-92
Sausalito: **VO**, 1886-88 (fragmentary summaries)
Shasta Springs: **VO**, 1891-92
Shelter Cove: **VO**, 1892
Shingle Springs: **VO**, 1886-88 (fragmentary summaries)
Sonoma: **SG-1**, 1850-51; **VO**, 1882-92
Spanish Ranche ("Silver Creek"): **SI**, 1862-63
Steeles (San Luis Obispo County): **VO**, 1886-92
Stockton (*see also* Camp Stanford): **SI**, 1856, 1867; **VO**, 1886-92
Stony Point: **SI**, 1869
Summit Valley (near Hopkins): **VO**, 1886
Susanville: **VO**, 1885-92
Sutter Creek: **VO**, 1887-88, 1892
Sweetwater Dam (San Diego County): **VO**, 1889-92
Tehachapi: **VO**, 1892
Tia Juana (Mexican line; San Diego County): **VO**, 1885-86
Tioga Mining District (Mono County): **VO**, 1883-84
Tipton: **VO**, 1886-88
Tower House (Shasta County): **VO**, 1885
Truckee: **VO**, 1889-91
Tulare: **VO**, 1892
Turlock: **VO**, 1891-92
Twin Oaks (San Diego County): **VO**, 1875-87 (monthly precipitation), 1876-78
Ukiah (*see also* Vichy Springs): **VO**, 1886, 1892
Union Ranche (Butte County): **SI**, 1858-63
Upper Lake: **VO**, 1886-91 (monthly precipitation), 1891-92
Upper Mattola: **VO**, 1886-92
Vacaville: 1886-92; **SI**, 1869-70
Vallejo (*see* Mare Island)
Vallicitos San Marcos (San Diego County): **VO**, 1876
Ventura (*see* San Buena Ventura)
Vichy Springs (Mendocino County): **VO**, 1887-88
Viejas (San Diego County): **VO**, 1875-76
Visalia (*see also* Camp Babbitt): **SI**, 1870-71; **VO**, 1875, 1887; **Reg Sta**, 1877-83 (2d order)
Volta: **VO**, 1890-92
Walla Walla Creek (Siskiyou County; 8 miles NW of Fort Jones): **VO**, 1886-92

Walnut Creek: **VO**, 1887-88, 1891-92
Watsonville: **SI**, 1869-72; **VO**, 1881
Weaverville: **VO**, 1884
West Butte (Sutter County): **VO**, 1886, 1887-88 (monthly precipitation), 1891-92
Westminster: **VO**, 1886-87
Westpoint: **VO**, 1887
Westport (Mendocino County): **VO**, 1885-88
Wheatland (Yuba County): **VO**, 1886-92
Willows: **VO**, 1887-92
Winchester (San Diego County): **VO**, 1891-92
Winters (4 miles E. of): **VO**, 1885-86
Woodford: **VO**, 1889-90
Woodland (10 miles SW. of; *see also* Mullans): **VO**, 1886-87
Wrights (Santa Clara County): **VO**, 1886-87
Yerba Buena Island: **SG-2**, 1869-73; **VO**, 1869-73
Yosemite Valley (Mariposa County): **VO**, 1880-81
Yountville (Veterans' Home): **VO**, 1891
Yreka: **VO**, 1886, 1891-92
Yuba City: **VO**, 1892
Yucaipa (East of): **VO**, 1887

**Daily Journals and Abstracts, 1871-1907.**

Bidwell, Fort (*see* Fort Bidwell)
Campo: 1875-82
Cape Mendocino: 1882-86
Eureka: 1886-1907
Fort Bidwell: 1884-88
Fresno: 1887-1907
Furnace Creek: 1891
Independence: 1894-96, 1898-1907
Keeler: 1885-94
Los Angeles: 1877-1907
Mount Tamalpais: 1898-1907
Point Reyes Light (Point Reyes): 1888-1907
Red Bluff: 1877-1907
Sacramento: 1877-1907
San Diego: 1871-1907
San Francisco: 1871-1907
San Jose: 1905-7
San Luis Obispo: 1885-86, 1894-1907
Southeast Farallon Island: 1903-7
Visalia: 1877-83

**Records of Hourly Wind Movement, 1881-1904.**

Bidwell, Fort (*see* Fort Bidwell)
Cape Mendocino: 1883-86
Eureka: 1886-1904
Fort Bidwell: 1885-88
Fresno: 1887-1904
Furnace Creek: 1891
Independence: 1892, 1895-96, 1898-1904
Keeler: 1885-94
Los Angeles: 1883-1904
Mount Tamalpais: 1898-1904
Point Reyes Light (Point Reyes): 1893-1904
Red Bluff: 1883-1904
Sacramento: 1881-1904
San Diego: 1883-1904
San Francisco: 1881-1904
San Luis Obispo: 1885-86, 1894-1904
Southeast Farallon Island: 1903-4

**Records of Hourly Wind Direction, 1891-1904.**

Fresno: 1896-1904
Independence: 1894-96, 1901-4
Keeler: 1892-94
Mount Tamalpais: 1898-1904

Sacramento: 1901-4
San Diego: 1891-1904
San Francisco: 1891-1904
Southeast Farallon Island: 1903-4

**Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1847-54.**

Benicia Barracks: 1849-54
Cantonment Far West, Bear Creek: 1851
Fort Humboldt: 1854
Fort Jones: 1853-54
Fort Miller, San Joaquin River: 1851-54
Fort Reading: 1852-54
Fort Yuma: 1852-54
Junipa: 1852-53
Monterey: 1847
Rancho de Junipa: 1851, 1853-54
Rancho del Chimp: 1852
San Diego: 1850-54
San Francisco: 1850, 1852-54
Sonoma: 1850-51

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Eureka: 1905, 1906, 1907
Fresno: 1905, 1906, 1907
Independence: 1905, 1906, 1907
Los Angeles: 1907
Mount Tamalpais: 1905, 1906, 1907
Point Reyes Light: 1905, 1906, 1907
Port Crescent: 1905
Red Bluff: 1905, 1906, 1907
Sacramento: 1905, 1906, 1907
San Diego: 1905, 1906, 1907
San Francisco: 1905, 1906, 1907
San Jose: 1905, 1906, 1907
San Luis Obispo: 1905, 1906, 1907
Southeast Farallon: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Auroras:

A.D. Barnard, Aurora observed at San Buenaventura, June 17, 1870.

Meteors:

A.D. Barnard, Meteor observed October 20, 1873, at Ventura.

Rain:

T.M. Logan, Rain table for Stockton, 1849-70.
Thomas Tennent, Rainfall in San Francisco, 1849-70.

General Meteorology:

Circulars relative to earthquakes by the earthquake committee, San Francisco.

Mrs. M.E.P. Ames, Parhelia observed at Big Meadow, April 12, 1872.
J. Hubana, Map of Mexico and California.

Local Meteorology--California:

George Davidson, Curves of horary variations of atmospheric pressure, September 4-October 6, 1853.
Benicia Barracks: W.W. Hayes, Ozone observations.
El Monte: George H. Peck, Rainfall in December, 1873.
Fort Yuma: Meteorological observations, 1866-67.
Los Angeles: Sherburne, Meteorological notes, April 1851 and May 1854.
Sacramento:
T.M. Logan, Hourly observations, June 21, 1856.
Dr. Hatch, Monthly means barometer and thermometer, 1854.
Rainfall, 1850-73.
Report of the curator of the Agassiz Institute on Meteorology.
San Diego: G.W. Barnes, Observations made on a trip to the mountains.
San Francisco:
Colonel Williamson, Blank forms for meteorological observations.
Thomas Tennent, Rainfall table, October 1849-April 1850, 1861-68.
R.M. Bache, The climate of San Francisco.
Santa Barbara: Santa Barbara as a sanitarium, *Santa Barbara Press*.

**Other Miscellaneous Meteorological Material Accumulated by the Smithsonian Institution, 1848-1891.**

Earthquakes:

Newspaper clippings, 1861, 1868.

Local Meteorology - United States:

Newspaper clippings, unmounted, arranged by subject, including California floods, 1861 and 1862.

Local Meteorology--California:

Register of hourly meteorological observations, explorations, and surveys west of the 100th Meridian, Cañon Station and Furnace Creek, August and September, 1875.
Branch Township: Rainfall from 1867 to 1873 (newspaper clipping).
Sacramento: Dr. T.M. Logan, Meteorological report, 1849-67 (mounted newspaper clipping).
San Diego:
G.W. Barnes, M.D., Extract of a report of observations of atmospheric conditions, 1871 and 1872 through April.
The Magnificent Climate of San Diego, temperatures for 1853 and 1858 (newspaper clipping).

Santa Barbara:
*Santa Barbara Weekly Press*, Saturday, September 27, 1873.
L.N. Dimmick and J.B. Shaw, Table of temperature at the Morris House, 1874, 1875.
Range of hygrometer and thermometer for the weeks ending Thursday, December 21, and Thursday, December 28, 1871 (newspaper clipping).

## Operational Records

**Station Inspection Reports, 1872-1912.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Bidwell, Fort: 1884-87 (8)
Campo: 1877-79 (14)
Cape Mendocino: 1884 (16)
Eureka: 1887 (35); 1892-1908
Fresno: 1893-1911
Independence: 1903-12
Keeler: 1887 (44)
Los Angeles: 1878-88 (50)
Mount Tamalpais: 1908
Point Reyes Light: 1889-1908
Red Bluff: 1879-88 (80); 1893-1908
Roseburg: 1893-1908
Sacramento: 1879-88 (83); 1893-1911
San Diego: 1872-88 (84); 1893-1908
San Francisco: 1872-88 (89); 1893-96
San Jose: 1907-8
San Luis Obispo: 1885 (85); 1900-1908
Southeast Farallons: 1908
Visalia: 1878-82 (98)

## Climatological Records

**Consolidated List of Climatological Records, 1852-92** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 63-70).

Abbott: **VO**, 1890
Agate: **VO**, 1892
Alma: **VO**, 1887
Animas Valley (La Plata County): **VO**, 1875
Antonito: **VO**, 1891-92
Apishapa (Las Animas County): 1890
Arboles: **VO**, 1892
Beaver Creek: **VO**, 1890
Bennett: **VO**, 1888-89
Boulder (*see* Smoky Hill Mine)
Box Elder: **VO**, 1890
Braddock (Summit County): 1885
Brandon: **VO**, 1890
Breckenridge: **VO**, 1892
Byers: **VO**, 1892
Canon City: **SI**, 1869
Cantonment Pagosa Springs (near Fort Lewis): **SG-2**, **VO**, 1880-83
Cantonment Rio de la Plata: **VO**, 1881
Carbon: **VO**, 1889
Carlisle: **VO**, 1890
Central City ("Mountain City"): **SI**, 1861-62
Cheray: **VO**, 1889
Cheyenne Wells: **VO**, 1892
Chromo: **VO**, 1890
Colorado City (El Paso County; variously labeled): **SI**, 1866-67, 1871
Colorado Springs: **SI**, 1871-73; **VO**, 1877-78, 1883, 1885-87; **Reg Sta**, 1873-76, 1878-79, 1887-90 (2d order)
Coulter (Grand County): **VO**, 1888-89
Crook: **VO**, 1890
Cumbres (Conejos County): **VO**, 1892
Delta: **VO**, 1888-90
Denver: **SI**, 1859-62, 1869-73; **VO**, 1877-80, 1889-90; **Reg Sta**, 1871-92 (1st order)
Dillon: **VO**, 1890
Dudley (Park County): **VO**, 1877-78
Durango: **R**, 1888
Eagle Farm (12 miles S. of Pueblo): **VO**, 1889-90
Elkhorn (Larimer County): **VO**, 1890
Fort Collins: **VO**, 1874, 1879-85, 1887-92; **SI**, 1872-73
Fort Crawford: **SG-2**, **VO**, 1889-90
Fort Garland (formerly Fort Massachusetts, *see* below): **SG-2**, **VO**, 1858-83
Fort Lewis (*see also* Cantonment Pagosa Springs): **SG-2**, **VO**, 1880-91
Fort Logan (near Denver): **VO**, 1889-92
Fort Lyon (formerly Fort Wise): **SG-2**, **VO**, 1860-89, 1867-76 (barometrical register)
Fort Massachusetts (*see also* Fort Garland): **SG-1**, 1852-58; **SG-2**, 1853-56
Fort Morgan: **SG-2**, **VO**, 1866-68
Fort Reynolds: **SG-2**, 1871; **VO**, 1868-72
Fort Sedgwick: **SG-2**, **VO**, 1865-71
Fort Wise (*see* Fort Lyon)
Fountain: **SI**, 1866, 1871-73; **VO**, 1874-75
Fraser: **VO**, 1889-90
Fruita: **VO**, 1889-90, 1892
Georgetown: **VO**, 1878-79, 1888-90 (summaries)
Golden: **SI**, 1860, 1867-73; **VO**, 1874-77, 1883-84
Grand Junction: **VO**, 1884, 1887-88
Grand Lake: **VO**, 1889
Grass Experiment Station (4½ miles N. of Fort Collins): **VO**, 1890
Greeley: **VO**, 1888-89, 1892
Gunnison: 1884
Hermosa (Animas Valley): **VO**, 1875-82
Hot Sulphur Springs: **VO**, 1874-76
Hugo: **VO**, 1891
Hutchinson: **VO**, 1875
Idaho Springs: **VO**, 1889-90
Kirk: **VO**, 1890, 1892

Kit Carson: **VO**, 1891-92
Kremmling: **VO**, 1889
Laird: **VO**, 1890
Lake (Lincoln County): **VO**, 1892
Laporte: **VO**, 1889-90
Las Animas: **SI**, 1873; **Reg Sta**, 1881-88 (2d order)
La Veta: **VO**, 1889-90
Lay: **VO**, 1890
Le Roy (6 miles SW. of; Logan County): **VO**, 1890
Little Annie Gold Mining Company (*see* Summit)
Livermore: **VO**, 1889-90, 1892
Longmont (*see also* MacGregor Estes Park): **VO**, 1892
Loveland: **VO**, 1889-90
MacGregor Estes Park (*see also* Longmont): **VO**, 1876
Magnolia (Arapahoe County): **VO**, 1892
Middle Box Elder (Larimer County): **VO**, 1889-90
Montezuma Valley (Montezuma County): 1890
Montgomery: **SI**, 1863-64
Montrose: **Reg Sta**, 1885-92 (2d order)
Moraine: **VO**, 1889-90
Mountain City (*see* Central City)
Pagosa Springs (*see* Cantonment Pagosa Springs)
Palmer Lake: **VO**, 1889-91
Pikes Peak: **VO**, 1889; **Reg Sta**, 1873-88, 1892 (2d order)
Pinkhampton (Larimer County): **VO**, 1890
Platoro: **VO**, 1889-90
Prescott: **VO**, 1882
Pueblo: **SI**, 1872-73 ("South Pueblo"); **VO**, 1874-78, 1883-86; **Reg Sta**, 1888-92 (2d order)
Redcliff: **VO**, 1890
Rico: **VO**, 1892
River Bend (Elbert County): **VO**, 1890
Rocky Ford: **VO**, 1888-82
St. Cloud: **VO**, 1892
Salida: **VO**, 1886-87
Sanborn: **VO**, 1890
San Luis (Experiment Station; Rio Grande County): **VO**, 1887, 1889-91
San Luis: **VO**, 1890-92
Sheridan Lake: **VO**, 1890, 1892
Silverton (La Plata County): **VO**, 1875-76
Smoky Hill Mine (Boulder County): **VO**, 1889-92
South Pueblo (*see* Pueblo)
Stanford: **VO**, 1889-90
Summit (Rio Grande County): **VO**, 1876-79, 1880 (Little Annie Gold Mining Company)
Sunnyside: **VO**, 1890
Trinidad: **VO**, 1880-81
Twin Lakes: **VO**, 1890, 1892 (precipitation only)
Ula: **VO**, 1875
Uncompahgre (Montrose County): **VO**, 1883
Upper Pine (Larimer County): **VO**, 1889-90
Wintervale: **VO**, 1890
West Las Animas (*see* Las Animas)
Wray: **VO**, 1890
Yuma: **VO**, 1890

**Daily Journals and Abstracts, 1871-1907.**

Colorado Springs: 1873-90, 1893-95
Denver: 1871-1907
Durango: 1904-7
Grand Junction: 1898-1907
Las Animas: 1882-88
Montrose: 1885-93
Pikes Peak: 1873-94
Pueblo: 1888-1907
Uncompahgre: 1883

**Records of Hourly Wind Movement, 1881-1904.**

Colorado Springs: 1893-94
Denver: 1881-1904
Durango: 1904
Grand Junction: 1899-1904
Montrose: 1885-93
Pikes Peak: 1884-88, 1892-94
Pueblo: 1888-1904
West Las Animas: 1883-88

**Records of Hourly Wind Direction, 1892-1904.**

Colorado Springs: 1893-94
Denver: 1892-1904
Durango: 1904
Grand Junction: 1899-1904
Pikes Peak: 1892-94
Pueblo: 1899-1904

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Denver: 1905, 1906, 1907
Durango: 1905, 1906, 1907
Grand Junction: 1905, 1906, 1907
Pueblo: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Meteors:

George H. Bochmer, August meteors observed in Colorado Springs, 1873.

Local Meteorology--Colorado:

W.N. Byers, General Manager, National Land Co., Department of Colorado: "Circular" and "A Year's Progress; Colorado in 1872."
"Colorado," Pamphlet published by the Denver Board of Trade, 1868.
"The Geography, Description, and Resources of Central and Southern Colorado," Pueblo, Board of Trade of Southern Colorado, 1869.
Golden City: E.L. Berthoud, Register of periodical phenomena, 1867.

**Other Miscellaneous Meteorological Material Accumulated by the Smithsonian Institution, 1848-1891.**

Local Meteorology--Colorado:

Newspaper clippings, undated: "About Colorado" and "Wonderful Colorado."
Colorado Springs: H.T.F. Gatchell, Impressions of climate, November 16, 1871.

## Operational Records

**Station Inspection Reports, 1872-1912.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Colorado Springs: 1874-87 (24)
Denver: 1872-88 (27); 1892-1911
Durango: 1906-12
Grand Junction: 1901-12
Montrose: 1885-87 (58)
Pike's Peak: 1874-87 (72)
Pueblo: 1891-1911
West Las Animas: 1885-87 (101)

## Climatological Records

**Consolidated List of Climatological Records, 1864-1900** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 108-111).

American Falls: **VO**, 1890-92
Beaver (Bingham County): **VO**, 1890-92
Boise: **VO**, 1888-93; ("Boise Barracks," Fort Boise): **Reg Sta**, 1877-90 (2d order)
Bonanza (Custer County): **VO**, 1890-92
Camp Connor: **VO**, 1864-65
Camp Lyon: **SG-2**, 1867-68
Camp Three Forks (Owyhee County): **SG-2**, 1867-71; **VO**, 1868-69
Coeur d'Alene (*see* Fort Sherman)
Eagle Rock: **Reg Sta**, 1880-83 (2d order)
Elk City: **VO**, 1891-92
Era: **VO**, 1889-92
Fort Boise (*see* Boise)
Fort Coeur d'Alene (*see* Fort Sherman)
Fort Hall: **SG-2**, **VO**, 1870-80, 1879-81
Fort Lapwai: **SG-2**, **VO**, 1864-84; **Reg Sta**, 1882-83 (3d order)
Fort Sherman (known as Fort Coeur d'Alene prior to May 1887): **SG-2**, 1886-1900; **VO**, 1880-81, 1886-87, 1889-93; **Reg Sta**, 1882-87 (3d order, Fort Coeur d'Alene)
Garden Valley: **VO**, 1890-92
Glenns Ferry: **VO**, 1891
Hailey: **VO**, 1892
Henry Lake (Bingham County): **VO**, 1890-92
Idaho Falls: **Reg Sta**, 1892 (2d order)
Kootenai: **VO**, 1889-92
Lemhi: **VO**, 1889
Lewiston: **VO**, 1888-91; **Reg Sta**, 1879-85 (2d order)
Martin: **VO**, 1892
Moscow: **VO**, 1892
Mullan: **VO**, 1889-91
Owyhee (*see* Camp Three Forks)
Payette: **VO**, 1890-92
Placerville: **VO**, 1890-91
Ruthburg (Washington County): **VO**, 1890-92
Soda Springs: **VO**, 1889-90

**Daily Journals and Abstracts, 1877-1907.**

Boise: 1877-90, 1898-1907
Coeur d'Alene, Fort (*see* Fort Coeur d'Alene)
Eagle Rock: 1880-83
Fort Coeur d'Alene: 1883-87
Fort Lapwai: 1880-83
Idaho Falls: 1892-99
Lapwai, Fort (*see* Fort Lapwai)
Lewiston: 1879-85, 1900-1907
Miner's Camp: 1881-83
Mission: 1881-83
Pocatello: 1899-1907

**Records of Hourly Wind Movement, 1883-1904.**

Boise: 1883-1904
Idaho Falls: 1892-99
Lewiston: 1884-85
Pocatello: 1899-1904

**Records of Hourly Wind Direction, 1901-4.**

Pocatello: 1901-4

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Boise: 1905, 1906, 1907
Lewiston: 1905, 1906, 1907
Pocatello: 1905, 1906, 1907

## Operational Records

**Station Inspection Reports, 1878-1911.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Boise City: 1878-88 (9); 1901-8
Coeur d'Alene, Fort: 1881-86 (17)
Idaho Falls: 1892-94
Lapwai: 1881-83 (48)
Lewiston: 1881-83 (49); 1901-11
Pocatello: 1901-8

## Climatological Records

**Consolidated List of Climatological Records, 1820-1902** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 145-154).

Afton: **SI**, 1870-73; **VO**, 1874-79, 1890
Albia: **VO**, 1887-88
Albion: **VO**, 1877, 1887-89
Algona: **SI**, 1861-73; **VO**, 1873-75, 1892
Alta: **VO**, 1890-92
Amana: **VO**, 1888-92
Ames: **SI**, 1869-71; **VO**, 1875-83, 1892
Atalissa: **SI**, 1867, 1873
Atlantic (Cass County): **VO**, 1890-92
Auburn: **VO**, 1879-80, 1882-88
Audubon: **VO**, 1891
Bancroft: **VO**, 1886-92
Bangor (Marshall County): **SI**, 1861, 1863
Bedford: **VO**, 1891
Belle Plaine: **VO**, 1889-92
Bellevue: **SI**, 1856-60
Blakeville (Black Hawk County): **VO**, 1889-92
Blockton (Taylor County): **VO**, 1891-92
Bonaparte: **VO**, 1891
Boonsboro (Boone County): **SI**, 1867-73; **VO**, 1874, 1876-81
Border Plains (Webster County): **SI**, 1856-59
Bowen's Prairie (Jones County): **SI**, 1853, 1869-71
Brookside (*see* Independence)
Brookville (*also* Packwood): **VO**, 1876-86
Burlington: **SI**, 1859-60, 1866-68
Camanche: **SI**, 1857-58
Carroll: **VO**, 1884, 1889-92; **W**, 1896-1902
Carson: **VO**, 1889-91
Cedar Bluff: **SI**, 1872
Cedar Falls: **VO**, 1890-92
Cedar Rapids (*also* Coe College): **VO**, 1882-92; **W**, 1896-1902; **R**, 1888
Centerville (Appanoose County): **VO**, 1874, 1892; **W**, 1892-1902
Ceres (Clayton County): **SI**, 1865-68
Charles City: **SI**, 1863-64; **VO**, 1891-92; **W**, 1896-1902
Clarinda: **SI**, 1865-66, 1872-73; **VO**, 1874, 1879, 1887-92; **W**, 1896-1902
Clear Lake: **VO**, 1888-89
Clinton: **SI**, 1856, 1865-71; 1876, 1879-92; **W**, 1896-1900
Coe College (*see* Cedar Rapids)
College Springs: **VO**, 1891-92
Concord (Hancock County): **VO**, 1891
Cordova: **VO**, 1891
Corning: **VO**, 1891-92
Corydon: **VO**, 1886, 1891-92
Council Bluffs: **SI**, 1871-73; **VO**, 1874-77, 1881
Cresco: **SI**, 1871-73; **VO**, 1874-92
Cromwell: **VO**, 1888-89
Dakota City: **SI**, 1867-68
Dallas Center: **VO**, 1891-92
Dana: **VO**, 1881-82
Davenport: **SI**, 1858, 1861-72; **Reg Sta**, 1871-92 (2d order)
Decorah: **VO**, 1892
Delaware: **VO**, 1891-92
Denison: **VO**, 1874-81, 1891-92
Denmark: **VO**, 1888-89
Des Moines (*see also* Fort Des Moines): **SI**, 1865-67; **VO**, 1874, 1881-91; **Reg Sta**, 1877-92
Dubuque: **SI**, 1851-52 (1st class), 1853-71; **Reg Sta**, 1873-92 (2d order), 1894-95 (3d order)
Dunkerton: **VO**, 1889
Durant: **SI**, 1871-72
Dysart: **VO**, 1888-89
Eagle Grove: **VO**, 1888-92
Eldora: **VO**, 1892
Elkader: **VO**, 1888-92
Emerson: **VO**, 1892
Emmetsburg: **VO**, 1892

Estherville: **VO**, 1889, 1892; **W**, 1901-2
Fairfield: **SI**, 1857-59; **VO**, 1888, 1891-92; **W**, 1896-1900
Fayette: **SI**, 1859-60; **VO**, 1888-92
Fontanelle ("Vanter's Grove"): **SI**, 1866-73; **VO**, 1874, 1891
Forest City: **W**: 1896-1902
Forrestville (*see also* Richland): **SI**, 1859-63
Fort Atkinson: **SG-1**, 1820 (formerly Cantonment Missouri and Camp Council Bluffs), 1821-27, 1840-43, 1846, 1848-49
Fort Croghan (20 miles below Council Bluffs): **SG-1**, 1843
Fort Des Moines (*see also* Des Moines): **SG-1**, 1835-37, 1843-46; **SG-2**, 1844-46
Fort Dodge: **SG-1**, 1851-53; **SG-2**, 1851-53; **SI**, 1867-69; **VO**, 1878-80
Fort Madison: **SI**, 1853-92
Franklin (Bremer County): **SI**, 1856-62
Galva: **VO**, 1891-92
Gillett Grove: **VO**, 1888-89
Glenwood: **VO**, 1875, 1879-81, 1888-91
Grand Meadow (Clayton County): **VO**, 1891
Grant City (Sac County): **SI**, 1869-73
Greenfield (Adair County: **VO**, 1890-92
Greenville (Clay County): **VO**, 1891
Grinnell: **VO**, 1888-92
Grundy Center: **VO**, 1891-92
Guttenberg: **SI**, 1864-73; **VO**, 1874-85
Hamlin: **VO**, 1881-87
Hampton: **VO**, 1888-92; **W**, 1896-1900
Harris Grove (Harrison County): **SI**, 1866-68, 1870
Havelock: **VO**, 1891-92
Hawkeye: **VO**, 1891-92
Hesper: **SI**, 1860-61
Hopeville (Clarke County): **VO**, 1891-92
Hopkinton (Delaware County): **SI**, 1872-73; **VO**, 1891-92
Humboldt: **VO**, 1882-91
Independence: **SI**, 1861-73; **VO**, 1873-92
Independence ("Brookside, Byron Township"; 4 mile NE. of Independence): **SI**, 1862-73; **VO** 1874-79
Indianola: **VO**, 1875, 1882-85, 1890-92
Iowa City: **SI**, 1856-58, 1861-73; **VO**, 1872-80, 1888-92; **W**, 1896-1902
Iowa Falls: **SI**, 1863-72 (near "Spring Grove"); **VO**, 1892; **W**, 1900-1902
Irwin: **VO**, 1890
Jefferson: **VO**, 1889
Keokuk: **SI**, 1851-55, 1866; **Reg Sta**, 1871-92 (2d order)
Keosauqua: **VO**, 1891-92; **W**, 1901-2
Kossuth ("Yellow Spring College," Des Moines County): **SI**, 1860-62
Larrabee: **VO**, 1889-92
Le Mars: **SI**, 1871
Leon: **VO**, 1891
Lizard (Pocahontas County): **SI**, 1869
Logan: **VO**, 1874-92
Ludlow (Allamakee County): **VO**, 1891
Lyons: **SI**, 1859-73
McCausland: **VO**, 1890-92
McGregor: **VO**, 1889
Manchester: **SI**, 1865-66; **VO**, 1883-86
Manson: **VO**, 1888-91
Maquoketa: **SI**, 1857; **VO**, 1888-92; **W**, 1896-1902
Marble Rock (*see also* Woodlands): **SI**, 1867-73
Marshalltown: **VO**, 1891-92; **W**: 1896-1902
Mason City: **VO**, 1891-92
Maxon (Monroe County): **VO**, 1891-92
Maynard: **VO**, 1884-85
Mechanicsville: **VO**, 1892
Milton: **VO**, 1892
Mineral Ridge (Boone County): **SI**, 1869-70
Monticello: **SI**, 1864-72; **VO**, 1875-92
Mooar (Lee County): **VO**, 1891-92
Mount Ayr: **VO**, 1892
Mount Pleasant: **SI**, 1863-64, 1871; **VO**, 1878-92
Mount Vernon: **SI**, 1857, 1860-73; **VO**, 1874-92
Murray: **VO**, 1891-92
Muscatine: **SI**, 1849 ("formerly Bloomington"), 1851-70, 1873; **VO**, 1874-92
Nashua: **VO**, 1878-87
Newton (6 miles N. of): **SI**, 1869-70

Nora Springs: **VO**, 1875-84
Ogden: **W**: 1896-1902
Onawa: **SI**, 1864
Osage: **SI**, 1866-67; **VO**, 1888-92
Osceola: **VO**, 1888-89; **W**, 1896-1902
Oskaloosa (Mahaska County): 1883-92
Ottumwa: **VO**, 1884-85
Packwood (*see* Brookville)
Panama (Shelby County): **VO**, 1890-92
Panora: **VO**, 1877-78 (summary), 1888
Pella: **SI**, 1854-56
Pleasant Plain: **SI**, 1856-64
Plum Spring (Delaware County): **SI**, 1854-59
Poultney (Delaware County): **SI**, 1853-54
Quasqueton: **SI**, 1853-56
Red Oak Junction: **SI**, 1872
Richland (*see also* Forrestville): **VO**, 1891-92
Rockford (*see* Woodlands)
Rock Rapids: **VO**, 1892
Rolfe: **SI**, 1868-70
Rossville (Allamakee County): **SI**, 1857-59
Round Grove (Scott County): **VO**, 1884-85
Ruthven: **VO**, 1891
Sac City: **SI**, 1870-72; **VO**, 1879-92
Sanborn: **VO**, 1891
Seymour: **VO**, 1892
Sibley: **W**, 1896-1902
Sioux City: **SI**, 1857-59, 1861-63; **VO**, 1864; **Reg Sta**, 1889-92 (2d order)
Smithland: **VO**, 1888
Spirit Lake: **VO**, 1892
Spring Grove (*see* Iowa Falls)
Stilson (Hancock County): **VO**, 1891
Storm Lake: **VO**, 1889-92; **W**, 1901-2
Tabor: **VO**, 1876-80
Tipton: **VO**, 1891-92
Urbana: **VO**, 1886
Vanter's Grove (*see* Fontanelle)
Vernon Springs (Howard County): **SI**, 1861-63
Vinton: **SI**, 1869; **VO**, 1888-92
Washington: **SI**, 1861; **VO**, 1875-79, 1882-86, 1888-92
Waterloo: **SI**, 1859-70; **VO**, 1874-75; **W**: 1896-1902
Waukon: **SI**, 1869-70
Webster City: **SI**, 1870-71; **VO**, 1876, 1887-92
Wesley: **VO**, 1888-90
West Bend: **VO**, 1888-92
West Branch: **SI**, 1871-72
West Union: **SI**, 1869-73; **VO**, 1874-75, 1884-87
Whitesborough (*see* Woodbine)
Whittemore (Kossuth County): **VO**, 1883-87
Williams: **VO**, 1891-92
Windsor (Fayette County): **VO**, 1891
Winterset: **VO**, 1891-92
Woodbine ("Whitesborough"): **SI**: 1867-71
Woodlands (near Rockford; *see also* Marble Rock): **VO**, 1874-77

**Daily Journals and Abstracts, 1871-1907.**

Burlington: 1875-85, 1906-7
Charles City: 1904-7
Des Moines: 1878-1907
Dubuque: 1873-94, 1896-1907 Keokuk: 1871-1907
Sioux City: 1889-1907

**Records of Hourly Wind Movement, 1881-1904.**

Charles City: 1904
Davenport: 1881-1904
Des Moines: 1881-1904
Dubuque: 1884-94, 1896-1904
Keokuk: 1884-1904
Sioux City: 1889-1904

**Records of Hourly Wind Direction, 1892-1904.**

Charles City: 1904
Davenport: 1892-1904
Des Moines: 1892-1904
Dubuque: 1896-1904

**Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1843-53.**

Fort Atkinson: 1843-46
Fort Croghan: 1843
Fort Des Moines: 1844-45
Fort Dodge: 1851-53

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Charles City: 1905, 1906, 1907
Davenport: 1905, 1906, 1907
Des Moines: 1905, 1906, 1907
Dubuque: 1905, 1906, 1907
Keokuk: 1905, 1906, 1907
Sioux City: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Auroras:

M.V. Ashby, Notice of aurora observed August 8, 1872, at Afton.
E. Babcock, Account of aurora observed August 8, 1872, at Boonsborough.
Charles E. Bessey, Auroras observed at Ames, June 1871.
Dr. Asa Horr, Auroras observed at Dubuque, September 19, 1851.
George Warne, Auroras observed at Independence, August 1872; Auroras observed in 1872.

Meteors:

Dr. Asa Horr, Meteors observed at Dubuque, November 1866.
A.T. Hudson, Meteors observed at Lyons, November 1866.

Wind:

W.L. Nicholson, The great tornado of 1860.
M.K. Taylor, Observations on the Camanche tornado.

Local Meteorology--Iowa:

Bloomington: T.S. Parvin, Meteorological table, 1848.
Boonsborough: E. Babcock, Account of storm, April 25, 1872.
Cresco: H.D. Noble, Meteorological notes, December 1871.

Dubuque: Asa Horr, Humidity, June 1853.
Fairfield: J.M. Shaffer, Meteorological notes, June-November, 1856. Meteorological notes, 1857-58.
Fontanelle: Weather report, December 1863.
Fort Madison:
  Daniel McCready, Temperature and precipitation, 1848-52.
  Miss L.A. McCready, Weather notes, June-December 1873.
Iowa City: Theo. S. Parvin, Meteorological observations, 1866.
Maquoketa: E.F. Hobart, Meteorological observations, February 1857.
Marble Rock: Weather report, March 1867.
Muscatine: J.P. Walton, Condensed report for 1871.
Pella: E.H.A. Scheerer, Meteorological journal, 1853.
Poultney (Delaware County): Benjamin F. O'Neill, Meteorological journal, 1853.
Red Oak: E.A. Harris, Report for August 1872.
West Union: F. McClintock, List of corrections in meteorological record.
Woodbine: D.K. Witter, Weather notes, July 1868, March 1869, August 1870.

**Other Miscellaneous Meteorological Material Accumulated by the Smithsonian Institution, 1848-1891.**

Local Meteorology--Iowa:

Des Moines: "Our Dismal Spring," May 4, 1873 (newspaper clipping).
Iowa City:
  T.S. Parvin, Meteorological observations, 1868.
  G. Hinrichs, *The Iowa Weather Bulletin*, press bulletins 65 to 102 (with gaps), 1879-81.
Marengo: "The Weather in Iowa," May 2, year not given.
Monticello: M.M. Moulton, Annual meteorological report for 1878 and 1879.
Muscatine:
  "Storm and Flood at the West," August 12, 1851 (newspaper clipping).
  T.S. Parvin, Temperature of four cold winters (1842-3, 1846-7, 1848-9, 1855-6).
Sac City: D.B. Nelson, Letter, November 17, 1872.
Washington: "The Iowa Zephyr" (undated newspaper clipping).

## Operational Records

**Station Inspection Reports, 1871-1911.**
Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Burlington: 1875-85 (13)
Charles City: 1905-10
Davenport: 1891-1911
Des Moines: 1878-88 (30); 1892-1910
Dubuque: 1873-87 (28); 1891-1911
Keokuk: 1871-88 (44); 1892-1911
Sioux City: 1891-1911

## Climatological Records

**Consolidated List of Climatological Records, 1827-1902** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 170-186).

Abilene: **VO**, 1890-92
Allison (Decatur County): **VO**, 1883-92
Alton: **SI**, 1873; **VO**, 1890-91
Altoona: **VO**, 1890-92
Antelope: **VO**, 1892
Arkalon (Seward County): **VO**, 1892
Arkansas City: **VO**, 1874-79
Atchison: **SI**, 1858, 1865-73; **VO**, 1874-86, 1891-92
Atkin: (Graham County): **VO**, 1889
Atlanta: **SI**, 1873; **VO**, 1874-76
Avon (*see* Burlington)
Baker: **W**, 1897-1902
Baxter Springs: **SI**, 1867-73; **VO**, 1873-78
Belleville: **SI**, 1872-73 (2½ miles SE. of); **VO**, 1874-77, 1886-87, 1891-92
Bendena: **VO**, 1880-90
Blue Rapids: **VO**, 1886-87
Bucklin: **VO**, 1892
Buffalo ("Buffalo Creek"): **SI**, 1872-73
Buffalo Park (Gove County): **VO**, 1886-92
Burlingame (formerly Council City): **SI**, 1857-61, 1871; **VO**, 1874-77
Burlington (near): **SI**, 1865-66, 1869-71
Cairo (Pratt County): **VO**, 1889-90
Cameiro: **VO**, 1886
Cawker City: **VO**, 1888-89
Cedar Vale: **VO**, 1879-80
Celestville (near Spring Hill): **SI**, 1859-60
Center Mound (Republic County): **VO**, 1877, 1878
Centerville: **SI**, 1873
Chanute: **VO**, 1874
Clay Center: **VO**, 1881-85
Colby: **VO**, 1888-89, 1892
Coldwater: **VO**, 1891-92
Columbus: **VO**, 1890-92
Concordia: **VO**, 1888-89; **Reg Sta**, 1885-92 (2d order)
Council City (*see* Burlingame)
Council Grove: **SI**, 1865 (summary), 1866-73; **VO**, 1873-77, 1881-82
Crawfordville ("Chestnut Lawn," Crawford County): **SI**, 1869-70
Creswell (Marion County): **VO**, 1876-83
Cunningham: **VO**, 1888-92
Dodge City (*see also* Fort Dodge: **VO**, 1888; **Reg Sta**, 1874-92 (1st order)
Douglass: **SI**, 1870-73
Douner's Station (Trego County): **VO**, 1867-68
Downs (Osborne County): **VO**, 1890-92
Dresden: **W**, 1900-1902
East Norway (Doniphan County): **VO**, 1887-88
Eldorado: **SI**, 1873; **VO**, 1886-92
Elk Falls: **VO**, 1883-92
Ellinwood (*see also* Great Bend): **VO**, 1875-78
Ellis (Ellis County): **VO**, 1892
Empire City (Cherokee County): **VO**, 1878-79
Emporia: **SI**, 1862, 1872; **VO**, 1877-92; **Reg Sta**, 1880-81 (Sunset)
Englewood: **VO**, 1888-92
Eureka Ranch (Trego County): **VO**, 1891-92
Fort Atkinson ("New Post on Arkansas River"): **SG-1**, 1850-53
Fort Dodge (*see also* Dodge City): **SG-2**, 1866-77; **VO**, 1867-71
Fort Ellsworth (*see* Fort Harker)
Fort Harker (formerly Fort Ellsworth): **SG-2**, **VO**, 1866-72
Fort Hayes (Ellis County): **SG-2**, 1867-89; **VO**, 1867-79, 1889
Fort Larned: **SG-2**, **VO**, 1860-78
Fort Leavenworth (*see also* Leavenworth): **SG-1**, 1827-59 (with gaps); **SG-2**, 1855-65, 1867-

76, 1887-92; **VO**, 1860-83, 1889-92, 1888-92 ("U.S. Military Prison")
Fort Riley: **SG-1**, 1853-59; **SI**, 1859-66 (with gaps); **VO**, 1860-76, 1882-83, 1886-93
Fort Scott (Bourbon County): **SG-1**, 1842-53; **VO**, 1880-86, 1892; **W**, 1896-1902
Fort Wallace (Wallace County): **SG-2**, **VO**, 1870-82 (with gaps)
Fremont (Graham County): **VO**, 1889-92
Garden City: **VO**, 1890-91
Gardner: **SI**, 1860-62
Gibson (Trego County): **VO**, 1888-89
Girard: **SI**, 1870-71; **VO**, 1880
Globe (Douglas County): **VO**, 1886-92
Goodland: **VO**, 1888
Gorham: **VO**, 1886
Gove: **VO**, 1889-92
Great Bend (*see also* Ellinwood): **VO**, 1879
Greensburg: **VO**, 1892
Grenola: **VO**, 1889
Havensville: **VO**, 1888-92
Hays: **VO**, 1886-92; **W**, 1896-1902
Hesston: **VO**, 1892
Holden (listed under various names in Butler County): **SI**, 1871-73
Holton: **SI**, 1867-73; **VO**, 1874-76, 1878-85
Horton: **VO**, 1890-92
Hoxie: **VO**, 1890-92
Hutchinson: **SI**, 1872; **VO**, 1891-92
Independence (near): **SI**, 1872-73; **VO**, 1874-80, 1877-92
Junction City: **SI**, 1862
Kansas City (formerly Wyandotte): **SI**, 1859-60; **VO**, 1884-87, 1889-92
Kellogg (Cowley County): **VO**, 1892
Kingman: **VO**, 1884-87
Kinsley: **VO**, 1874-78
Kiowa: **VO**, 1891-92
Kirwin: **R**, 1888
La Crosse: **VO**, 1890-92
La Harpe: **VO**, 1888-91
Lakin: **VO**, 1890-92
Larned: **VO**, 1890-91
Lawrence: **SI**, 1857-64, 1867-73; **VO**, 1873-92
Leavenworth (*see also* Fort Leavenworth): **SI**, 1857-62, 1866-72; **VO**, 1884-88 (West Leavenworth), 1888; **Reg Sta**, 1871-92 (2d order)
Lebo: **VO**, 1889-92
Lecompton: **SI**, 1859-61, 1866
Leonard (Sherman County): **VO**, 1886
Leoti: **VO**: 1888-92
Le Roy (3½ miles SE. of): **SI**, 1867, 1869-73; **VO**, 1874-76
Liberal: **VO**, 1892
Lincoln: **VO**, 1890-92
Lisbon (Logan County): **VO**, 1892
McAllaster: **VO**, 1892
McPherson: **VO**, 1883, 1890-92; **W**, 1896-1902
Macksville: **VO**, 1889-92; **W**, 1896-1902
Manhattan: **SI**, 1859-73; **VO**, 1874-92; **W**, 1896-99; **Reg Sta**, 1876 (2d order)
Mankato: **VO**, 1889-90, 1892
Mapleton: **SI**, 1857-58
Marion: **VO**, 1892
Marquette: **VO**, 1874-75
Marydale Farm: **VO**, 1887-89
Medicine Lodge Valley (Barber County): **VO**, 1874, 1891-92
Minneapolis: **VO**, 1892
Moneka (Linn County): **SI**, 1859
Monument: **VO**, 1886, 1892
Morse (*also* labeled Stanley): **VO**, 1876-79, 1887-92
Morton (Morton County): 1892
Mountain City: **SI**, 1860-61
Neosho Falls: **SI**, 1859-61, 1868-70
New England Ranch (Sheridan County): **VO**, 1891-92
Ninnescah (Kingman County): **VO**, 1888
Norton: **VO**, 1890-92
Oakley: **VO**, 1886, 1891-92
Oakwood (Linn County): **VO**, 1874
Oberlin: **VO**, 1892; **R**, 1888
Ogallah: **VO**, 1886, 1892
Olathe: **SI**, 1864-72
Osage City: **W**, 1896-1902
Osawatomie: **VO**, 1882-83

Osborne City (2½ miles N. of): **SI**, 1873
Oswego: **VO**, 1885, 1890-92
Ottawa: **VO**, 1885-87
Oxford Township (*see* Morse)
Page City: **VO**, 1890
Paola: **SI**, 1869-73 (3½ miles NW. of); **VO**, 1880
Pauline: **VO**, 1892
Perry: **SI**, 1873
Phillipsburg: **VO**, 1891-92
Plainville: **VO**, 1892
Pleasant Dale (Rush County): **VO**, 1892
Pontiac (Butler County): **VO**, 1874-76
Pretty Prairie: **VO**, 1882-84
Rago: **VO**, 1889
Ridgeway (Osage County): **SI**, 1863
Rome (Sumner County): **VO**, 1888-89; 1892
Rural: **SI**, 1872
Russell: **VO**, 1882
Saline: **VO**, 1882-92; **W**, 1896-1902; **R**, 1888
Santa Fe (Haskell County): **VO**, 1888-89
Sedan: **VO**, 1888-92; **W**: 1896-1902
Sedgwick: **VO**, 1876-78
Seneca: **VO**, 1888, 1890-92
Sharon Springs: **VO**, 1892
Sheridan: **VO**, 1886
Sherlock (Finney County): **VO**, 1884-85
Shields: **VO**, 1890-92
Stafford: **VO**, 1891
Stanley (*see* Morse)
Sterling: **VO**, 1884-86, 1891-92
Sycamore Springs (Butler County): **SI**, 1873
Syracuse: **VO**, 1892
Tonganoxie: **VO**, 1874-75
Topeka: **SI**, 1858, 1872-73; **VO**, 1875-90, 1892; **Reg Sta**, 1887-88 (2d order), 1889-98 (3d order), 1892 (2d order)
Toronto: **W**, 1896-1902
Tribune: **VO**, 1888-92
Ulysees: **VO**, 1891-92
Wakefield: **VO**, 1886-92
Wallace: **VO**, 1881; **R**, 1888
Wellington: **VO**, 1879-91
Weskan: **VO**, 1891-92
Westmoreland: **VO**, 1884-86
Wichita: **SI**, 1873; **Reg Sta**, 1888-92 (2d order)
Williamsburg: **SI**, 1871-73
Williamstown: **SI**, 1870-72
Wilson: **VO**, 1877-88
Winona: **VO**, 1892
Wyandotte (*see* Kansas City)
Yates Center: **VO**, 1879-92

**Daily Journals and Abstracts, 1871-1907.**

Concordia: 1885-1907
Dodge City: 1874-1907
Iola: 1905-7
Leavenworth: 1871-93
Manhattan: 1876
Topeka: 1887-1907
Wichita: 1888-1907

**Records of Hourly Wind Movement, 1881-1904.**

Concordia: 1885-1904
Dodge City: 1883-1904
Leavenworth: 1881-93
Topeka: 1901-4
Wichita: 1888-1904

**Records of Hourly Wind Direction, 1891-1904.**

Dodge City: 1891-98
Topeka: 1901-4

**Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1843-54.**

Fort Atkinson: 1851-53
Fort Scott: 1843-53
Fort Riley: 1853-54
New Post (Fort Atkinson), Arkansas River: 1851

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Concordia: 1905, 1906, 1907
Dodge: 1905, 1906, 1907
Iola: 1905, 1906, 1907
Topeka: 1905, 1906, 1907
Wichita: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Auroras:

B.F. Mudge, Aurora observed at Manhattan, August 8, 1872.

Meteors:

W. Beckwith, Meteors observed at Olathe, November 1866.
B.F. Mudge, Meteors observed at Manhattan, November 1866.
F.H. Snow, Meteoric shower at Lawrence, November 14, 1867.

Local Meteorology--Kansas:

William K. Kedzil, Abstracts of the meteorology of 1874, condensed from the records of the Kansas State Agricultural College
George H. Boehmer, Highest and lowest temperatures observed in Kansas, 1857-71.
Baxter Springs: W. Hyland, Report for April 1871.
Belleville:
  J.W. Raynolds, Meteorological report, August 1872.
  J.W. Raynolds, Weather notes, 1873.
Burlington: Allen Crocker, Chart of appearance of sky, February 5, 1870.
Holton: Dr. James Watters, Account of earthquake, April 24, 1867.
Lawrence: F.H. Snow, Meteorological summary for 1873.
Leavenworth: H.D. McCarty, Account of earthquake, April 24, 1867.

Neosho Falls: B.F. Goss, Meteorological observations, March 1859.
Olatha: W. Beckwith, Account of weather, 1868.
Sycamore Springs: Rainfall, May-December 1873.
Topeka: J.D. Parker, Account of earthquake, April 24, 1867.

**Other Miscellaneous Meteorological Material Accumulated by the Smithsonian Institution, 1848-1891.**

Local Meteorology--Kansas:

Temperatures at various forts, 1860-64.
Lawrence:
  Weather report for February and May 1871.
  Meteorological summary for 1871 (newspaper clippings).
Manhattan: B.F. Mudge, Note about house struck by lightning, May 18, 1867.

## Operational Records

**Station Inspection Reports, 1871-1911.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Concordia: 1885-88 (24); 1891-1910
Dodge City: 1874-87 (30); 1891-1911
Iola: 1907-10
Leavenworth: 1871-88 (49)
Topeka: 1892-1910
Wichita: 1888 (100); 1890-1910

## Climatological Records

**Consolidated List of Climatological Records, 1810-1902** [SL 1].
Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 194-198).

Abbeville: **VO**, 1888-91
Algiers (New Orleans): **VO**, 1886-87
Amite: **CR**, 1882-1902
Anchorage Plantation (near Shreveport): **SI**, 1869-70
Atlanta: **SI**, 1873
Audubon Park (*see* New Orleans)
Baton Rouge: **SG-1**, 1820-21 (Baton Rouge Barracks), 1821-25, 1828-40, 1843-59; **SG-2**, **VO**, 1865-79 (General Hospital, with gaps), 1875-79, 1889-92
Benton: **SI**, 1867-69
Calhoun: **VO**, 1892
Cameron: **VO**, 1889-92
Camp Atkinson (Lake Charles): **SG-1**, 1830
Camp Ripley (Nachitoches): **SG-1**, 1820-21
Camp Salubrity (3 miles from Nachitoches): **SG-1**, 1844
Camp on Sabine River: **SG-1**, 1837-38
Cantonment Cass: **SG-1**, 1833-34
Carrollton (near New Orleans, Jefferson Parish): **SI**, 1873
Cheneyville: **SI**, 1870; **VO**, 1889-91; **CR**, 1882-89
Collins Landing (near Ponchatoula): **SI**, 1870-73
Columbia: **VO**, 1889-91
Convent (Jefferson College): **VO**, 1889-91
Coushatta: **VO**, 1889-91; **CR**, 1894-96
Crowley: **VO**, 1889-91
Davis: **VO**, 1892
Delhi: **SI**, 1871-73; **VO**, 1874-75
Donaldsonville: **VO**, 1889-91
Emilie: **VO**, 1889-92
Fort Jackson (on Mississippi River, 65 miles below New Orleans): **SG-1**, 1831-35; **SG-2**, 1867-73, 1889-92
Fort Jessup (25 miles SW. of Nachitoches): **SG-1**, 1822-45
Fort Pike (on island of Petite Coquille): **SG-1**, 1821, 1824-36, 1838, 1842-49; **SG-2**, **VO**, 1866-69
Fort St. Philips (on Mississippi River, 65 miles below New Orleans): **SG-1**, 1820-31
Fort Wood (Chef Menteur): **SG-1**, 1828-35, 1842-46
Franklin: **CR**, 1882-83
Franklinton: **VO**, 1889-91
Girard: **VO**, 1889-91
Grand Coteau: **VO**, 1883-84, 1889-92
Homer: **VO**, 1889-91
Houma: **VO**, 1889-92
Independence (*see* Tickfaw Station)
Jackson Barracks (New Orleans): **VO**, 1867-73, 1889-92
Lafayette (Vermillionville prior to June 1884): **VO**, 1889-92; **CR**, 1881-1901
Lake Charles (*see also* Camp Atkinson): **VO**, 1877, 1880, 1892
Lake Providence: **VO**, 1892
Lawrence: **VO**, 1889-92
Liberty Hall (Bienville Parish): **VO**, 1884-92
Luling (St. Charles Parish): **VO**, 1884, 1889-92
Mandeville: **VO**, 1889-91
Mansfield: **CR**, 1896-1902
Marksville: **VO**, 1889-91
Melville: **VO**, 1889-91
Minden: **VO**, 1889-91; **CR**, 1884-1902
Monroe: **VO**, 1889-92; **CR**, 1881-1902
Morgan City: **CR**, 1881-83
Moss Grove (*see* Trinity)
Mount Airy: **VO**, 1889-91
Natchitoches (*see also* Camps Ripley and Salubrity): **CR**, 1881-96
New Iberia (*see also* Olive Branch and Rosedale Plantations): **VO**, 1882-83, 1889-91; **CR**, 1883-1902

New Orleans (*see also* Algiers, Carrollton, and Jackson Barracks): **SG-1**, 1820-21, 1825-35, 1838-53, 1855-59; **SG-2**, 1865; **SI**, 1849, 1851-57, 1861, 1867-73; **VO**, 1889-92 (Audubon Park); **Reg Sta**, 1871-92 (1st order); **Pr**. 1810 (in French)
Okalooska (Ouachita Parish): **VO**, 1877-81
Olive Branch Plantation (New Iberia); **SI**, 1873; **VO**, 1874
Opelousas: **OR**, 1884-87
Petite Conquille (*see* Fort Pike)
Pointe a la Hache: **VO**, 1889-91
Point Pleasant (Tensas Parish): **SI**, 1872; **VO**, 1875-84
Ponchatoula (*see* Collins Landing)
Port Eads: **VO**, 1889-91; **Reg Sta**, 1881-83 (2d order), 1888-98 (3d order)
Poydia College (Pointe Coupee): **SI**, 1859
Robeline: **CR**, 1896-1902
Rosedale Planatation (New Iberia): **SI**, 1872
St. Charles College: **VO**, 1886-87, 1889-91
Shell Beach: **VO**, 1889-91
Shreveport: **SI**, 1869, 1871-73; **VO**, 1874-75; **Reg Sta**, 1871-92 (2d order)
Terrebonne: **CR**, 1882-83
Thibodeaux: **VO**, 1889-91
Tickfaw Station (near Independence): **SI**, 1859-60
Trinity: **SI**, 1856-59 (Plantation near Trinity), 1860 (Moss Grove, near Trinity)
Vidalia Plantation (Concordia Parish): **SI**, 1861; **VO**, 1889-91
Whiteville: **CR**, 1882-85
Winnfield: **VO**, 1889-91

**Daily Journals and Abstracts, 1870-1907.**

New Orleans: 1870-1907
Port Eads: 1881-83
Shreveport: 1871-1907

**Records of Hourly Wind Movement, 1881-1904.**

New Orleans: 1881-1904
Shreveport: 1881-1904

**Records of Hourly Wind Direction, 1891-1904.**

New Orleans: 1891-1904

**Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1845-51.**

Baton Rouge: 1846-51
Camp Salubrity: 1845
Fort Jessup: 1845
Fort Pike: 1846
Fort Wood: 1846
General Hospital, New Orleans Barracks: 1851
New Orleans Barracks: 1846

**Monthly Reports of Weather Bureau Stations, 1905-7.**

New Orleans: 1905, 1906, 1907
Shreveport: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.** Some items for New Orleans are reproduced in Microfilm Publications M1379.

Meteors:

Ernest Turner, Account of meteor observed at Point Pleasant, June 29, 1872.

Local Meteorology--Louisiana:

Fort Jesup: Thermometric register, 1823-45.
Franklin: Meteorological observations, June 1843.
Greenville: R.W. Foster, Meteorological notes, November 1869, and Meteorological reports, 1869.
New Orleans:
- Lafour, Hourly meteorological observations, 1809-10.
- Dr. E.H. Barton, Meteorological and mortuary chart, 1849; thermometric observations, 1820-48.
- D.T. Lillie, Meteorological journal, 1841-44.
- Meteorological notes in annual report of board of health, 1849.
- N.B. Benedict, Meteorological register, July 1853.
- I. Stathem, Report of self-registering thermometer at the office of the board of health, September 1872, March-December 1873.

Petite Coquille: Dr. E.H. Bell, Topographical, geological, and medical report, June 1820, with chart.

**Other Miscellaneous Meteorological Material Accumulated by the Smithsonian Institution, 1848-1891.**

Local Meteorology--Louisiana:

New Orleans:
- E.H. Barton, letter of February 20, 1856.
- Meteorological observations, December 1858.
- I. Wathem, Temperature measures, January 1873.
- E.J. Riley, Rainfall in New Orleans, 1876, 1877.

St. Francisville: S.R. Gifford, Weather for January 1857.

## Operational Records

**Station Inspection Reports, 1871-1912.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

New Orleans: 1871-84 (65); 1891-1910
Port Eads: 1879-81 (77)
Shreveport: 1871-88 (88); 1893-1912

## Climatological Records

**Consolidated List of Climatological Records, 1825-1902** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 264-274).

Afton: **SI**, 1865-67, 1869-72
Albert Lea: **VO**, 1892
Alexandria: **R**, 1888; **W**, 1896-99
Argyle: **VO**, 1888
Beaver Bay: **SI**, 1858-73; **VO**, 1873-75
Bonniwell's Mills (*see* Hutchinson)
Bowles Creek (Washington County): **SI**, 1865-66
Brainerd: **VO**, 1874-75
Breckenridge: **Reg Sta**, 1872-80 (2d order)
Buchanan (north shore, Lake Superior): **SI**, 1857-58
Buffalo: **VO**, 1886
Burlington (Lake County): **SI**, 1857-58, 1860
Caledonia: **VO**, 1892
Camden: **VO**, 1892
Campbell: **W**, 1896-1902
Cass Lake: **SI**, 1852
Cass Lake Mission ("Belle Prairie"): **SI**, 1856
Chatfield: **SI**, 1859-61
Chester: **VO**, 1884-85
Chippewa Agency (*see* Leech Lake)
Collegeville: **VO**, 1892
Crookston: **VO**, 1889; **W**, 1896-1902
Currie: **VO**, 1884
Danville: **SI**, 1868
De Graff: **VO**, 1881
Detroit: **W**, 1896-1902
Duluth: **Reg Sta**, 1870-92 (1st order)
Elkton: **VO**, 1891
Excelsior: **SI**, 1863-73
Faribault: **VO**, 1890-91
Fergus Falls: **R**, 1888
Forest City (Meeker County): **SI**, 1858-66
Fort Gaines (*see* Fort Ripley)
Fort Ridgely (Nicollet County): **SG-1**, 1853-59 (with gaps); **SG-2**, 1853-68; **VO**, 1860-67
Fort Ripley (formerly Fort Gaines; Crow Wing County): **SG-1**, 1849-50 (Fort Gaines); **SG-1**, 1850-59 (with gaps); **SG-2**, 1870-77; **VO**, 1860-77, 1888; **R**, 1888
Fort Snelling (near St. Paul; *see also* St. Peter River): **SG-1**: 1825-42, 1845-58 (with gaps); **VO**, **SG-2**, 1849-51, 1867-92
Grand Meadow: **VO**, 1889; **W**, 1896-1902
Grand Portage: **SI**, 1867
Granite Falls: **W**, 1896-1900
Hastings: **SI**, 1861-62; **VO**, 1884
Hazelwood (Brown County) **SI**, 1855-62
Holdingford: **SI**, 1873; **VO**, 1874
Hutchinson (*also* "Lake Hook" and "Bonniwell's Mills"): **SI**, 1872-73; **VO**, 1874-76
Itasca (Anoka County): **SI**, 1860-61, 1863
Kandotta (Stearns County): **SI**, 1859
Kinbrae: **VO**, 1891
Koniska (McLeod County): **SI**, 1869-73
Lac qui Parle (Renville County): **SI**, 1844, 1852-54
Lake Hook (*see* Hutchinson)
Lake Winnebigosh Mission (Itasca County): **SI**, 1856-57
Lapham (on the Red River): **SI**, 1857-59
Leech Lake (Cass County): **SI**, 1871 ("Chippewa Agency")
Le Sueur: **VO**, 1888-91
Litchfield: **SI**, 1870-72
Madelia: **SI**, 1869-70
Mankato: **SI**, 1864
Marshall: **VO**, 1890
Minneapolis: **SI**, 1864-72; **VO**, 1873-92; **Reg Sta**, 1890-98 (3d order)
Montevideo: **VO**, 1889-92
Monticello: **SI**, 1865
Moorhead: **VO**, 1874-78; **Reg Sta**, 1881-92
Morris: **VO**, 1889-92
Northfield: **VO**, 1881-86, 1892
Oak Lake (*see* Sylvan Park)

Ortonville: **R**, 1888
Osseo: **VO**, 1889
Pajutazee (Dakota County): **SI**, 1860-62
Park Rapids: **W**, 1896-1902
Preston: **VO**, 1886
Princeton: **SI**, 1856-60
Red Lake: **SI**, 1852-54
Red Wing: **SI**, 1855-56, 1867, 1872-73; **Reg Sta**, 1890-92
Redwood Falls: **R**, 1888
Rochester: **SI**, 1869; **VO**, 1885
St. Anthony: **SI**, 1872-73; **VO**, 1874-78
St. Anthony Falls: **SI**, 1854
St. Charles: **VO**, 1889-92
St. Cloud: **SI**, 1860 (near), 1861-62, 1869; **VO**, 1892
St. Joseph: **SI**, 1855
St. Paul: **SI**, 1862-73; **VO**, 1874; **Reg Sta**, 1870-92 (1st order)
St. Peter River (*see also* Fort Snelling): **SG-1**, 1820-21
St. Vincent: **Reg Sta**, 1879-92
Sandy Lake: **SI**, 1851-52
Sauk Centre: **SI**, 1868-69
Sheldon (Houston County): **VO**, 1889-92
Sibley (Sibley County): **SI**, 1865-73; **VO**, 1874-76
Stillwater: **SI**, 1858
Sylvan Park (Oak Lake, Becker County): **SI**, 1871-73
Tamarack (Hennepin County): **SI**, 1863-64
Tracy: **R**, 1888
Traverse des Sioux: **SI**, 1849-51
Wabasha: **SI**, 1857-58; **VO**, 1892
Waterford (Dakota County): **SI**, 1873
White Earth Reservation: **SI**, 1869-70
Whitewater (Winona County): **SI**, 1871-73; **VO**, 1874
Winnebago: **W**, 1896-1902
Worthington: **W**, 1896-1902

**Daily Journals and Abstracts, 1870-1907.**

Breckenridge: 1872-80
Duluth: 1871-1907
Minneapolis: 1890-1907
Moorhead: 1881-1907
Red Wing: 1890-93
St. Paul: 1870-1907
St. Vincent: 1880-96

**Records of Hourly Wind Movement, 1881-1904.**

Duluth: 1881-1904
Minneapolis: 1891-99
Moorhead: 1883-1904
Red Wing: 1890-93
St. Paul: 1881-1904
St. Vincent: 1881-96

**Records of Hourly Wind Direction, 1891-1904.**

Duluth: 1892-1904
Minneapolis: 1896-99
Moorhead: 1892-1904
St. Paul: 1891-1904
Two Harbors: 1894-1904

**Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1821-54.**

Fort Gaines: 1849-50
Fort Ridgely: 1853-54
Fort Ripley: 1850-54
Fort St. Anthony: 1821-25
Fort Snelling: 1843-54

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Duluth: 1905, 1906, 1907
Minneapolis: 1905, 1906, 1907
Moorhead: 1905, 1906, 1907
St. Paul: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Local Meteorology--Minnesota:

Beaver Bay: Thomas Clark, Description of instruments, method of observing, &c., February 10, 1859.
Burlington: A.A. Hibbard, Meteorological observations, 1857, 1858.
Enterprise: John Greethurst, Weather report, March 1871.
Hennepin: J.B. Clough, Profile of barometric curves, December 1864-January 1866 [sic].
Litchfield: H.L. Wadsworth, Diagram of halo around moon, December 27, 1871.
New Ulm: John Kanba, Report for October 1867.
Waterville: Lewis Stone, Meteorological reports, April-August 1866.

**Other Miscellaneous Meteorological Material Accumulated by the Smithsonian Institution, 1848-1891.**

Local Meteorology--Minnesota:

Newspaper clippings on tornado of September 1868, and the Red River Valley of Minnesota, April 11, 1872.
St. Paul: Meteorological notes for May through August 1871, and May, August, and September, 1872.

## Operational Records

**Station Inspection Reports, 1871-1911.** Reports are arranged alphabetically by name of station with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Breckenridge: 1872-80 (10)
Duluth: 1871-88 (31); 1892-1911
Minneapolis: 1892-1911
Moorhead: 1884-87 (59); 1892-1911
St. Paul: 1871-88 (82); 1891-1911
St. Vincent: 1884-87 (83); 1889-94
Wadena: 1880 (99)

## Climatological Records

**Consolidated List of Climatological Records, 1820-1902** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 280-291).

Adrian: **VO**, 1890-92
Allenton: **SI**, 1864-71
Alton: **VO**, 1892
Appleton City: **VO**, 1889-92
Archie: **VO**, 1882-83
Arlington: **VO**, 1891-92
Arthur (Vernon County): **VO**, 1892
Ashley: **VO**, 1878-81
Athens: **SI**, 1863-66
Augusta: **SI**, 1859 (near); **VO**, 1892
Austin (Cass County): **VO**, 1890-92
Ava: **VO**, 1892
Bedford (Livingston County): **VO**, 1882-83
Bellefontaine (3 miles above mouth of Missouri River): **SG-1**, 1820-22
Bethany: **SI**, 1859-60; **VO**, 1890-92
Big Piney: **VO**, 1892
Bolivar: **SI**, 1859-61, 1868-70
Boonville: **SI**, 1859-61
Bradleyville: **VO**, 1890
Brunswick: **VO**, 1889-92; **W**, 1896-1902
Bryant: **VO**, 1892
Canton: **SI**, 1862-68 ("Wyaconda Prairie"), 1867-68; **VO**, 1892
Cape Girardeau: **SI**, 1856-58
Carrollton: **SI**, 1859-60; **VO**, 1890-92
Carthage: **VO**, 1884-87, 1889-92
Cassville: **SI**, 1859-61; **VO**, 1890-91
Cave Spring: **SI**, 1870-73; **VO**, 1874-75
Centerville: **VO**, 1878-87, 1890-92
Chamois: **VO**, 1892
Chillicothe: **VO**, 1891-92
Clay Township (Ralls County): **VO**, 1889
Clinton (*also* "Eight Mile"): **VO**, 1882-83, 1891-92
Columbia: **VO**, 1890; **Reg Sta**, 1889-92 (2d order)
Conception: **VO**, 1883-92
Concordia: **VO**, 1890-92
Corning: **SI**, 1870-73; **VO**, 1874-83
Cowgill: **VO**, 1892
Craig: **VO**, 1879-80, 1889-90
Curryville: **VO**, 1882-85
Dadeville: **VO**, 1890-1892
Darksville (Randolph County): **VO**, 1890-92
Dry Ridge (near Hannibal): **SI**, 1853-55
Dundee (Franklin County): **SI**, 1859-61
Dunnegan: **VO**, 1890-92
East Lynne: **VO**, 1891-92
Easton: **SI**, 1864-66
East Prairie: **SI**, 1869
Edge Hill (Reynolds County): **VO**, 1892
Edina: **VO**, 1892
Edinburg (Grundy County): **SI**, 1866-67
Eight Mile (*see* Clinton)
Eldon: **VO**, 1890-92
Emerson (Marion County): **SI**, 1859
Excelsior Springs: **VO**, 1888-92
Farmersville (Livingston County): **VO**, 1892
Farmington: **SI**, 1859; **VO**, 1882
Fayette: **VO**, 1886-92
Forest City: **VO**, 1876
Forest Park: **VO**, 1890-91
Fortscue: **VO**, 1890-91
Fox Creek (St. Louis County): **VO**, 1891-92
Frankford: **VO**, 1874-82, 1885-90
Fulton: **VO**, 1892
Gainesville: **VO**, 1892
Gallatin: **SI**, 1872-73; 1892
Galt: **VO**, 1892
Gayoso (Pemiscot County): **VO**, 1892
Glasgow (*also* "Morrison Observatory"): **VO**, 1889-92
Glensted: **VO**, 1892
Glenwood: **VO**, 1890
Gordonville: **VO**, 1890-92

Gorin: **VO**, 1892
Grand Pass: **VO**, 1888-91
Greenfield: **SI**, 1859, 1861-62
Greenville: **SI**, 1859-61
Grove Dale (Maries County): **VO**, 1892
Hannibal (*see also* Dry Ridge): **SI**, 1856; **VO**, 1862, 1888-89, 1891-92; **Reg Sta**, 1892 (2d order)
Harris: **VO**, 1889-92
Harrisonville: **SI**, 1859-70; **VO**, 1889-92; **W**, 1896-1902
Harviell: **VO**, 1892
Hastain: **VO**, 1892
Hematite: **SI**, 1868-72
Hermann: **SI**, 1859-60; **VO**, 1889-92
Hermitage: **SI**, 1867-69
High Hill: **SI**, 1873
Hornersville: **SI**, 1859-60
Houston: **VO**, 1892
Independence: **VO**, 1879, 1885, 1892
Irena (Worth County): **VO**, 1892
Ironton: **VO**, 1889-90, 1892; **W**, 1896-1902
Jackson: **VO**, 1886
Jefferson Barracks (10 miles below St. Louis): **SG-1**, 1827-59 (with gaps); **SG-2**, 1855, 1882-92; **VO**, 1860-62, 1882-84, 1889-92
Jefferson City: **SI**, 1867-72; **VO**, 1890-92; **W**, 1896-1902
Kansas City: **SI**, 1870-73; **VO**, 1873-75, 1877-80, 1889-91; **Reg Sta**, 1888-92 (1st order)
Keytesville: **SI**, 1869, 1871, 1873
Kidder: **VO**, 1889-92; **W**, 1896-1902
Kirksville: **SI**, 1859-62
Laborville (St. Louis County): **SI**, 1863-64
Lakenan: **VO**, 1888-89
Lamar: **VO**, 1890, 1892; **W**, 1896-1902; **Reg Sta**, 1885-88 (2d order)
La Monte: **VO**, 1889-92
Lancaster: **SI**, 1859
Langdon: **VO**, 1891-92
Lebanon: **VO**, 1878-80, 1884, 1890-92
Lees Summit: **VO**, 1879-80
Lexington: **SI**, 1859-61; **VO**, 1878, 1892; **W**, 1896-902
Liberty: **VO**, 1890-92
Linn Creek: **VO**, 1892
Linneus: **VO**, 1892
Luray (near): **SI**, 1859, 1861
McCune Station (Pike County): **VO**, 1892
Mansfield: **VO**, 1892
Marble Hill: **VO**, 1891-92
Marshall: **VO**, 1890-92
Marshfield: **VO**, 1889
Maryville: **W**, 1896-1902
Mexico: **VO**, 1888, 1892; **W**, 1896-1902
Miami: **VO**, 1869-90
Mine La Motte: **VO**, 1891-92
Morrison Observatory (*see* Glasgow)
Mound City: **VO**, 1892
Mount Vernon: **SI**, 1871-73; **VO**, 1874-75, 1892
Neosho: **VO**, 1892
Nevada: **SI**, 1871-73; **VO**, 1874, 1889-90
New Boston: **VO**, 1892
New Frankfort (Saline County): **VO**, 1888-90
New Hartford: **VO**, 1892
New Haven: **VO**, 1889-92
New Palestine (Cooper County): **VO**, 1892
North Springfield: **SI**, 1871-72; **VO**, 1880-81
Oakfield (Franklin County): **VO**, 1892
Oak Ridge: **VO**, 1889-92
Olden: **VO**, 1892
Oregon: **SI**, 1867-72; **VO**, 1876-81, 1889-92
Ota (Stone County): **VO**, 1892
Ozark: **VO**, 1888-90
Palingra (Marion County): **VO**, 1892
Palmyra: **SI**, 1856 (St. Paul's College), 1856-57
Paris: **SI**, 1859-62; **VO**, 1892
Phillipsburg: **VO**, 1892
Pickering: **VO**, 1890-92
Pierce City: **VO**, 1876, 1878-89
Platte River (Buchanan County): **VO**, 1890-92
Poplar Bluff: **VO**, 1892
Princeton: **VO**, 1888-92
Protem (*see also* Leadhill, Ark.): **VO**, 1882-83, 1889, 1891
Rea: **VO**, 1892
Rhineland: **SI**, 1859-60
Richland: **SI**, 1872-73; **VO**, 1873-74

Richmond: **SI**, 1859-60
Rockport: **SI**, 1856
Rolla: **SI**, 1867-73; **VO**, 1874-77, 1891-92
St. Charles: **VO**, 1889-92
St. Joseph: **SI**, 1857-58, 1869-73
St. Louis: **SI**, 1852, 1854-73; **VO**, 1874, 1881-83, 1892; **Reg Sta**, 1870-92 (1st order); **Pr**, 1845-65
St. Louis Arsenal (3 miles S. of St. Louis): **SG-1**: 1835-56; **SG-2**, 1844-56
Sarcoxie: **VO**, 1890-92
Savannah: **VO**, 1889
Sedalia: **VO**, 1889-91
Shelbina: **VO**, 1889-92
Springfield (*see also* North Springfield): **SI**, 1857-58; **VO**, 1877-79, 1884-87, 1891; **Reg Sta**, 1882-83, 1887-92 (2d order)
Stanberry: **VO**, 1892
Steelville: **VO**, 1889-92
Stellada (Henry County): **VO**, 1890-92
Stockton: **SI**, 1859-61
Stoutland: **SI**, 1873; **VO**, 1874-75
Strother: **VO**, 1892
Thayer: **VO**, 1890
Tower Grove: **SI**, 1861-64
Trenton (5 miles SW. of): **SI**, 1859
Tuscumbia: **SI**, 1859
Union: **SI**, 1865-67
Unionville: **VO**, 1896-1902
Vancleve (Maries County): **VO**, 1892
Vermont (Cooper County): **VO**, 1892
Warrensburg: **SI**, 1868-70; **VO**, 1874-75, 1886, 1889-92
Warrenton: **SI**, 1859-63; **VO**, 1880-86, 1888-92; **W**, 1896-1902
Waynesville: **SI**, 1859
Wellsville: **VO**: 1892
West Plains: **VO**, 1892
Wet Glaize ("Wet au Glaize"): **SI**, 1859-60, 1872-73; **VO**, 1874-78
Wheatland: **VO**, 1892
Whiteside: **VO**, 1892
Willow Springs: **VO**, 1889-90
Withers' Mill (Marion County): **VO**, 1889-92
Wyaconda Prairie (*see* Canton)
Zeitonia (Wayne County): **VO**, 1891-92

**Daily Journals and Abstracts, 1870-1907.**

Columbia: 1889-1907
Forest Park (St. Louis): 1887
Hannibal: 1892-1907
Kansas City: 1888-1907
Lamar: 1885-88
St. Louis: 1870-1907
Springfield: 1882-1907

**Records of Hourly Wind Movement, 1873-1904.**

Columbia: 1889-1904
Forest Park: 1887
Hannibal: 1892-99
Kansas City: 1888-1904
Lamar: 1885-88
St. Louis: 1873-1904
Springfield: 1887, 1889-1904

**Records of Hourly Wind Direction, 1891-1904.**

Columbia: 1897-1904
Kansas City: 1891-1904
St. Louis: 1891-1904

**Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1843-54.**

Fort Leavenworth: 1843-49, 1851-54
Jefferson Barracks: 1843-54
St. Louis Arsenal: 1843-54

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Columbia: 1905, 1906, 1907
Hannibal: 1905, 1906, 1907
Kansas City: 1905, 1906, 1907
St. Louis: 1905, 1906, 1907
Springfield: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Auroras:

A. Averbeck, Aurora observed July 9, 1872, at St. Louis.

Meteors:

A. Fendler, Meteors observed at Allenton, November 1866.

Rain:

St. Louis: Monthly amounts of rain at St. Louis, 1853-57, 1860-67.

Local Meteorology--Missouri:

Charleston: Meteorological observations, 1868.
Corning: Horace Martin, Weather notes, November 1872.
Edina: J.O. Agnew, Tabular statement of fall of rain, May 1859-January 1867.
Hannibal: Meteorological report, April (no year given).
High Hill: W.S. Chapin, Thermometric record, December 1872.
Lexington: W.T. Davis, Memorandum of weather, 1855.
Rolla: Homer Ruggles, Registry of periodical phenomena, 1868.
St. Louis:
  Dr. George Engelmann
    Maximum, minimium, and mean temperatures, 1848-52.
    Mean temperature of every month, 1836-53.
    Meteorological condition and mortality of St. Louis, 1855.
    Meteorology for 1867.
    Meteorological observations, 1856, 1870.

Dr. A. Wislizenus, Meteorological observations, 1861, 1869.
B.D. Kribben, Weekly meteorological records, 1872-73.
Chart, November, December 1872; Daily means, October 1872.
Stoutville: A.Y. Carlton, Weather report, December 1871.

**Other Miscellaneous Meteorological Material Accumulated by the Smithsonian Institution, 1848-1891.**

Local Meteorology--Missouri:

Rolla: "Hail Stones as Big as Nail Kegs," 1873 (newspaper clipping).
St. Louis:
A. Fendler, Register of meteorological observations for 1859.
A. Wislizenus, Summary of weather between 1861 and 1872.
"Tornado," March 30, 1872 (newspaper clipping).
Springfield: R.H. McCord, letter of June 10, 1871.

## Operational Records

**Station Inspection Reports, 1873-1911.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Columbia: 1887 (23)
Hannibal: 1895-1911
Kansas City: 1888 (44); 1891-1910
Lamar: 1885-88 (47)
St. Joseph: 1910
St. Louis: 1871-88 (81); 1892-1911
Springfield: 1887-88 (90); 1890-1910

## Climatological Records

**Consolidated List of Climatological Records, 1862-1898** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 292-299).

Benton City (Chouteau County): **SI**, 1868
Billings: **Reg Sta**, 1883 (2d order)
Blackfoot Agency (*see* Piegan)
Boulder: **VO**, 1891-92
Bozeman: (*see also* Fort Ellis): **SI**, 1872-73; **VO**, 1874-75, 1892
Camp Baker (*see* Fort Logan)
Camp Cooke (at mouth of Judith River; Chouteau County): **VO**, 1866-69
Camp Poplar River (near Poplar Creek Agency): **SG-2**, 1882-85, 1888-93; **VO**, 1885, 1888-93
Carroll (Dawson County): **VO**, 1874-76
Cartersville: **Reg Sta**, 1882-83 (3d order)
Castle (Meagher County): **VO**, 1891
Choteau: **VO**, 1890-92
Cokedale (Park County): **VO**, 1891-92
Custer Station (formerly Terry's Landing, *see below*): **R**, 1888; **Reg Sta**, 1882-83 (3d order)
Dearborn Canyon (*see* Hogan)
Deer Lodge: **SI**, 1867-73; **VO**, 1891-92; **Reg Sta**, 1882-83 (3d order)
Eagle Creek (Chouteau County): **VO**, 1885
Elk Park (Jefferson County): **VO**, 1892
Foley: **Reg Sta**, 1882 (3d order)
Fort Assinaboine (Chouteau County): **SG-2**, **VO**, 1879-92; **Reg Sta**, 1880-92 (2d order)
Fort Benton: **SG-2**, **VO**, 1869-81; **SI**, 1862, 1869; Reg Sta, 1871-76, 1880-86 (2d order)
Fort C.F. Smith (on Big Horn River; Custer County): **VO**, 1866-68
Fort Custer (on Big Horn River): **SG-2**, 1891-97; **VO**, 1889-93; **Reg Sta**, 1879-82 (2d order), 1883-91
Fort Ellis (near Bozeman): **SG-2**, **VO**, 1868-86
Fort Keogh (Custer County): **VO**, 1877-93; **Reg Sta**, 1879-83 (2d order)
Fort Logan (formerly Camp Baker; Meagher County): **SG-2**, 1870-80; **VO**, 1870-80, 1889-90, 1892
Fort Maginnis (Fergus County): **SG-2**, **VO**, 1880-90; **Reg Sta**, 1882-89 (2d order), 1889-90 (3d order)
Fort Missoula (4 miles from Missoula): **SG-2**, 1886-98; **VO**, 1886-93; **Reg Sta**, 1880-83 (2d order)
Fort Shaw (on Sun River; Cascade County): **VO**, 1867-91; **Reg Sta**, 1880-86 (2d order)
Fort Sheridan: **VO**, 1874
Galpin: **R**, 1888
Glendive: **VO**, 1889-92; **Reg Sta**, 1882-83 (3d order)
Great Falls: **VO**, 1891-92
Havre: **Reg Sta**, 1892 (2d order)
Helena: **SI**, 1866-68; **Reg Sta**, 1880-92 (2d order)
Hogan (*also* "Dearborn Canyon"; Lewis and Clarke County): **VO**, 1892
Horr (Park County): **VO**, 1890-92
Livingston: **VO**, 1891-92
Martinsdale: **VO**, 1890-92
Miles City: **Reg Sta**, 1891-92 (2d order)
Missoula (*see also* Fort Missoula): **SI**, 1870-73; **VO**, 1873-76
New Chicago: **Reg Sta**, 1882-83 (3d order)
Piegan (Blackfoot Agency, Chouteau County): **VO**, 1879-82, 1890-91
Poplar River: **Reg Sta**, 1882-89 (2d order)
Powder River (Custer County): **VO**, 1889-92
Rock Creek: **Reg Sta**, 1882 (3d order)
Rouge Rive: **VO**, 1877
Sheldon (Missoula County): **VO**, 1888-90
Terry's Landing (*see* Custer Station): **Reg Sta**, 1882-83 (3d order)
Virginia City: **SI**, 1871; **VO**, 1888-92; **Reg Sta**, 1871-80

White Sulphur Springs: **VO**, 1892

Woodworth: **VO**, 1890

**Daily Journals and Abstracts, 1871-1907.**

Assiniboine, Fort (*see also* Fort Assiniboine): 1891-92
Billings: 1883
Crows Nest: 1881-82
Custer, Fort (*see also* Fort Custer): 1891
Custer Station (*see also* Terry's Landing): 1891
Deer Lodge: 1881-83
Fort Assiniboine (*see also* Assiniboine, Fort): 1879-90
Fort Benton: 1871-86
Fort Custer (*see also* Custer, Fort): 1879-90
Fort Ellis: 1880-83
Fort Keogh: 1879-83
Fort Maginnis: 1882-90
Fort Missoula: 1879-83
Fort Shaw: 1880-86
Havre: 1892-1907
Helena: 1880-1907
Kalispell: 1899-1907
Miles City: 1891-97
Missoula Ferry: 1881
New Chicago: 1881-83
Poplar River: 1882-89
Superior City: 1881-82
Terry's Landing (*see also* Custer Station): 1881-83
Virginia City: 1872-80

**Records of Hourly Wind Movement, 1883-1904.**

Assiniboine, Fort (*see also* Fort Assiniboine): 1889-92
Custer, Fort (*see also* Fort Custer): 1889-91
Fort Assiniboine: 1881-88
Fort Benton: 1884-86
Fort Custer: 1884-88
Fort Maginnis (*see also* Maginnis, Fort): 1884, 1886-88
Fort Shaw: 1884-86
Havre: 1892-1904
Helena: 1883-1904
Kalispel: 1899-1904
Maginnis, Fort: 1889
Miles City: 1891-97
Poplar River: 1884-89

**Records of Hourly Wind Direction, 1891-1904.**

Assiniboine, Fort: 1891-92
Havre: 1892-1904
Helena: 1892-1904
Kalispell: 1899-1904

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Havre: 1905, 1906, 1907
Helena: 1905, 1906, 1907
Kalispell: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Local Meteorology--Montana:

W.W. Johnson, Meteorology for 1859.

## Operational Records

**Station Inspection Reports, 1872-1911.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Assinnaboine, Fort: 1880-88 (3)
Benton, Fort: 1872-86 (8)
Custer, Fort: 1880-88 (17)
Deer Lodge: 1880 (27)
Ellis, Fort: 1880 (34)
Glendive: 1884-87 (37)
Havre: 1893-1911
Helena: 1880-88 (40), 1893-1911
Kalispell: 1900-11
Keogh, Fort: 1880 (45)
Maginnis, Fort: 1883-88 (53)
Miles City: 1892-1911
Missoula, Fort: 1880 (53)
Poplar River: 1883-88 (76)
Shaw, Fort: 1880-86 (91)
Terry's Landing: 1887 (94)
Virginia City: 1872-80 (98)

## Climatological Records

**Consolidated List of Climatological Records, 1849-1902** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 300-311)

Albion: **VO**, 1892
Alliance: **VO**, 1889-92
Ansley: **VO**, 1888-92
Arcadia: **VO**, 1892
Ashland: **VO**, 1892; **W**, 1896-1902
Ashton: **VO**, 1892
Auburn: **VO**, 1891-92
Austin (Sherman County): **VO**, 1879-81
Bassett: **VO**, 1892
Beatrice: **VO**, 1891-92
Beaver City: **VO**, 1890-92
Bellevue: **SI**, 1857-73; **VO**, 1874
Bingham: **VO**, 1889-90
Blackbird Hills (*see* Omaha Mission)
Brookwalter (Pawnee County): **VO**, 1892
Brownville: **SI**, 1858-59; **VO**, 1886-89
Burwell: **VO**, 1890-92
Callaway: **VO**, 1892
Camp Sheridan (west fork of Beaver Creek): **SG-2**, **VO**, 1876-81
Clear Creek (*see* Yutan)
Columbus: **VO**, 1885; **W**, 1896-1902
Cornlea: **VO**, 1892
Craig: **VO**, 1889
Crawford: **VO**, 1890-91
Creighton: **VO**, 1889-92
Crete: **VO**, 1883-92; **Reg Sta**, 1887-88 (2d order), 1889-93 (3d order)
Culbertson: **VO**, 1889-92; **R**, 1888
Dakota City: **SI**, 1867-69
David City: **VO**, 1888-92
Decatur: **SI**, 1869
De Soto (Washington County: **SI**, 1867-73; **VO**, 1874-91
Dunning: **VO**, 1890-92
Elkhorn: **SI**, 1858-59 ("Richland"), 1860-71
Emerson: **SI**, 1871-73; **VO**, 1874-79 (with gaps)
Ericson: **VO**, 1890-92
Ewing: **VO**, 1892
Fairbury: **VO**, 1885-92 (with gaps); **W**, 1896-1902
Fairfield: **VO**, 1890
Fairmont: **W**, 1896-1902
Falls City: **VO**, 1888-90, 1892
Fontanelle: **SI**, 1861-63, 1868-69
Fort Hartstuff (on Loup River; Valley County): **SG-2**, **VO**, 1875-81
Fort Kearney: **SG-1**, 1849-59; **SG-2**, 1865-71; **SI**, 1849; **VO**, 1860-63, 1865-67
Fort McPherson: **SG-2**, **VO**, 1866-80
Fort Niobrara (Cherry County): **SG-2**, **VO**, 1880-92
Fort Omaha (Omaha Barracks): **SG-2**, **VO**, 1869-73, 1889-92
Fort Robinson: **VO**, 1883-93; **Reg Sta**, 1883 (3d order, no data)
Fort Sidney (near Sidney): **SG-2**, **VO**, 1872-80, 1886-94
Franklin: **VO**, 1892
Fremont: **VO**, 1882-92
Geneva: **VO**, 1892
Genoa: **VO**, 1875-92
Gering: **VO**, 1889-92
Glendale (Cass County): **SI**, 1861, 1866-69
Grand Island: **VO**, 1888
Grant: **VO**, 1890-92
Haigler: **VO**, 1892
Hartington: **VO**, 1891-92; **W**, 1896-1902
Harvard: **VO**, 1884-87, 1890-92
Hastings: **VO**, 1890
Hayes Center: **VO**, 1892
Hay Springs: **VO**, 1886-92
Hebron: **VO**, 1891
Holdrege: **VO**, 1890
Holmesville: **VO**, 1889
Howard (Nemaha County): **VO**, 1874-81

Howe: **VO**, 1889-91
Imperial: **VO**, 1892
Inavale: **VO**, 1883
Ionia (Dixon County): **SI**, 1865
Johnson: **VO**, 1883-84
Kearney (*see also* Fort Kearney) **Reg Sta**, 1892 (2d order)
Kennedy: **VO**, 1889-92
Kenosha (Cass County): **SI**, 1859-62
Kimball: **VO**, 1888-92
Lexington, **VO**, 1889-92
Lincoln: **SI**, 1870; **VO**, 1881-83, 1886-92
Long Pine: **VO**, 1890
Madison: **VO**: 1884-86
Madrid: **VO**, 1892
Magnolia: **VO**, 1887
Marquette: **VO**, 1883-92
Marysville (Seward County): **VO**, 1881
Milford: **VO**, 1883
Minden: **VO**, 1892
Nebraska City: **SI**, 1859, 1868-71; **VO**, 1874, 1882-84, 1892
Nesbit (Logan County): **VO**, 1892
Newcastle: **SI**, 1870-72
Norfolk: **SI**, 1873; **VO**, 1874-79, 1891-92
North Loup: **VO**, 1888-92
North Platte: **Reg Sta**, 1874-92 (2d order)
Nursery Hill (Otoe County): **SI**, 1865
Oakdale: **VO**, 1891-2; **W**, 1896-1902
Omaha (Omaha Barracks; *see* Fort Omaha): **SI**, 1857-60 ("Pioneer Grove"), 1861, 1868; **Reg Sta**, 1870-92 (2d order)
Omaha Mission ("Omaha Agency," "Blackbird Hills"): **SI**, 1867-73
O'Neill: **VO**, 1890-92; **W**, 1896-1902
Ord: **VO**, 1882
Orleans: **VO**, 1892
Ough (Dundy County): **VO**, 1891-92
Palmer: **VO**, 1888
Pawlet (Deuel County): **VO**, 1891-92
Peru: **SI**, 1867, 1869; **VO**, 1883-84
Plattsmouth: **SI**, 1873; **VO**, 1874-80
Plum Creek (Dawson County): **VO**, 1889
Plymouth: **SI**, 1873
Ponco: **VO**, 1880
Rapid City: **VO**, 1883
Red Cloud: **SI**, 1872-73; **VO**, 1874, 1892
Red Willow (Red Willow County): **VO**, 1883-85
Republican City (near): **SI**, 1873
Richmond (Furnas County): **VO**, 1875-76
Rock Bluffs (Cass County): **SI**, 1860
Santee Indian Agency (Knox County): **SI**, 1871-73; **VO**, 1874-75, 1892
Saronville: **VO**, 1889-90
Schuyler: **VO**, 1891-92
Seward: **VO**, 1885, 1890-92
Sidney (*see also* Fort Sidney): **VO**, 1886
Springview: **VO**, 1891-92
State Farm (Lancaster County): **VO**, 1892
Steinauer: **VO**, 1892
Stella: **VO**, 1883-84
Stockham: **VO**, 1883-87
Stockville: **VO**, 1891
Stratton: **VO**, 1889
Stuart: **VO**, 1889
Superior: **VO**, 1883-84, 1889-92
Sutton: **VO**, 1883
Syracuse: **VO**, 1888-92
Table Rock: **VO**, 1883, 1892
Tamora: **VO**, 1887
Tecumseh: **VO**, 1884-92; **W**, 1896-1902
Tekamah: **VO**, 1892; **W**, 1896-1902
Thedford: **VO**, 1891-92
Utica: **VO**, 1882-83
Valentine: **W**, 1896; **Reg Sta**, 1885-92 (2d order)
Wallace: **VO**, 1890-92
Weeping Water: **VO**, 1888-92
West Hill: **VO**, 1891
Westpoint: **SI**, 1873; **VO**, 1892
Whitman: **VO**, 1890-92
York: **VO**, 1890-92
Yutan (*also* "Clear Creek"): **VO**, 1874-87

**Daily Journals and Abstracts, 1871-1907.**

Crete: 1887-93
Fort Robinson: 1885-88
Kearney: 1892-94
Lincoln: 1896-1907
North Platte: 1874-1907
Omaha: 1871-1907
Valentine: 1885-1907

**Records of Hourly Wind Movement, 1881-1904.**

Kearney: 1892-94
North Platte: 1883-94
Omaha: 1881-1904
Valentine: 1885-94, 1900-1904

**Records of Hourly Wind Direction, 1892-1904.**

Omaha: 1892-1904
Valentine: 1903-4

**Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1849-54.**

Fort Kearney: 1849-54

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Lincoln: 1905, 1906, 1907
North Platte: 1905, 1906, 1907
Omaha: 1905, 1906, 1907
Valentine: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Auroras:

H.H. Brown, Aurora observed at Dakota City, July 10, 1868.

Local Meteorology--Nebraska:

W.H. Wagner, Barometrical observations at Fort Kearney, South Pass, and Honey Lake Wagon-Road, 1857-58.
Meteorological observations at Fort Kearney, Laramie, &c., 1860-64.
Peru: J.W. McKenzie, Account of earthquake, April 24, 1867.

Local Meteorology--Dakota:

Ponca Agency: Atmospherical phenomena, November 22, 1871.

**Other Miscellaneous Meteorological Material Accumulated by the Smithsonian Institution, 1848-1891.**

Local Meteorology--Nebraska:

Lincoln: "The Nebraska Snow Storm," April 21, year not given (newspaper clipping).

## Operational Records

**Station Inspection Reports, 1871-1910.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Crete: 1887 (23)
Lincoln: 1896-1910
North Platte: 1876-88 (67); 1890-1908
Omaha: 1871-88 (69); 1891-1910
Robinson, Fort: 1886-88 (80)
Valentine: 1885-87 (98); 1891-1908

## Climatological Records

**Consolidated List of Climatological Records, 1860-1892** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 312-314).

Camp Halleck (*see* Fort Halleck)
Camp Winfield Scott (Humboldt County): **SG-2**, **VO**, 1867-70
Carson City: **VO**, 1875-92; **Reg Sta**, 1887-92 (2d order)
Ely: **VO**, 1890
Eureka: **VO**, 1880
Fort Churchill (Churchill County): **SG-2**, 1860-69; **VO**, 1860-69 (*also* Churchill Barracks)
Fort Halleck (12 miles S. of Halleck): **SG-2**, 1867-69, 1873-74, 1883-86; **VO**, 1867-80, 1886
Fort McDermit (Humboldt County): **SG-2**, **VO**, 1865-89
Fort McGarry (Humboldt County): **SG-2**, **VO**, 1865-68
Fort Ruby (Ruby Valley; White Pine County): **VO**, 1863-68
Gold Mountain: **VO**, 1890
Palmetto: **VO**, 1890
Pioche: **Reg Sta**, 1877-83 (2d order)
Punch Bowl: **VO**, 1890
Reno: **VO**, 1890
Ruby Hill: **VO**, 1889
St. Thomas: **SI**, 1871
Sodarville: **VO**, 1890
Star City (Humboldt County): **SI**, 1865
Tempuite (Lincoln County): **VO**, 1878-79
Tuscarora: **VO**, 1890
Verdi: **VO**, 1890
White Pine (Nye County): **VO**, 1890
Winnemucca: **Reg Sta**, 1877-92 (2d order)
Yaunts Ranch (Nye County): **VO**, 1890-91

**Daily Journals and Abstracts, 1877-1907.**

Carson City: 1888-1905
Pioche: 1877-83
Reno: 1905-7
Tonopah: 1906-7
Winnemucca: 1877-1907

**Records of Hourly Wind Movement, 1891-1904.**

Carson City: 1891, 1897-1904
Winnemucca: 1881-1904

**Records of Hourly Wind Direction, 1900-1904.**

Carson City: 1900-1904

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Carson City: 1905
Reno: 1905, 1906, 1907
Tonopah: 1906, 1907
Winnemucca: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Local Meteorology--Nevada:

Aurora: Samuel Young, Weather report for September 1868.

## Operational Records

**Station Inspection Reports, 1878-1911.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Carson City: 1888 (21); 1891-1905
Pioche: 1878-82 (77)
Reno: 1906-11
Tonopah: 1908-12
Winnemucca: 1878-88 (100); 1891-1911

## Climatological Records

**Consolidated List of Climatological Records, 1849-1911** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 333-339).

Abiquiu (*see also* La Palrareda Tract and Canon de Chama): **SG-1**, 1851
Albert (*also* "Tequesquite"): **VO**, 1890-91
Albuquerque: **SG-1**, 1849-59; **SG-2**, 1862-67; **VO**, 1860-67, 1888-91; **Reg Sta**, 1878-79 (3d order)
Antelope Springs (Valencia County): **VO**, 1889-91
Archuleta (Bernalillo County): **VO**, 1889
Arroyo Hondo: **VO**, 1889
Belen: **VO**, 1889
Bernalillo: **VO**, 1890-91
Bloomfield: **VO**, 1891
Cabezon: **VO**, 1889
Camp Cimarron: **VO**, 1868
Camp Good Hope: **VO**, 1889
Camp Plummer (*see* Fort Lowell)
Camp Rio Membres: **VO**, 1864
Camp Vigilance (near Albuquerque): **SG-1**, 1852
Canon de Chama (near Abiquiu): **VO**, 1889-90
Cantonment Burgwin (9 miles N. of Taos): **SG-1**, 1854-59; **SG-2**, 1853-60; **VO**, 1860
Carlsbad (*see* Eddy)
Carthage: **Reg Sta**, 1890-91 (3d order)
Cebolletta: **SG-1**, 1849-51
Chama: **VO**, 1889-91
Clayton: **VO**, 1889
Coolidge: **VO**, 1888-91
Cuba: **VO**, 1889-91
Dona Ana: **SG-1**, 1851
Don Fernandino: **SG-1**, 1850
Dulce: **VO**, 1891
Eddy (near Carlsbad): **VO**, 1889, 1891-92
El Rito: **VO**, 1889-91
Embudo: **VO**, 1889-92 (with gaps)
Estalina (Socorro County): **VO**, 1889-91
Folsom: **VO**, 1891
Fort Bascom (San Miguel County): **VO**, 1864-66, 1869-70
Fort Bayard (Grant County): **VO**, 1867-78, 1881, 1886-93; **Reg Sta**, 1877-78 (2d order), 1882-83 (3d order)
Fort Bumner: **VO**, 1869
Fort Canby (on Mojave River): **SG-2**, **VO**, 1863-64
Fort Conrad (near San Marcial): **SG-1**, 1851-54
Fort Craig (3 miles S. of San Marcial): **SG-1**, 1854-59; **SG-2**, **VO**, 1856-78); **Reg Sta**, 1877-78 (2d order), 1884 (3d order)
Fort Cummings (at Crooks Mountain Spring; Grant County): **SG-2**, **VO**, 1865-73
Fort Fillmore (near La Mesilla): **SG-1**, 1851-59 (with gaps); **VO**, 1860-61
Fort Fauntleroy (*see* Fort Lyon)
Fort Floyd (*see* Fort McLane)
Fort Lowell (formerly Camp Plummer; Taos County): **SG-2**, **VO**, 1867-69
Fort Lyon (formerly Fort Fauntleroy): **VO**, 1860-61 (Fort Fauntleroy), 1861
Fort McLane (formerly Fort Webster, Fort Floyd): **SG-1**, 1852-53 (Fort Webster); **VO**, 1860-61 (Fort Floyd), 1861
Fort McRae (near Rio Grande River; Socorro County): **SG-2**, **VO**, 1864-65, 1868-76
Fort Marcy (Santa Fe): **SG-1**, 1849-56; **SG-2**, 1862-73, 1889-92; **VO**, 1860-67, 1889-92
Fort Selden (9 miles from Dona Ana): **SG-2**, **VO**, 1865-77. 1886-90
Fort Stanton (Lincoln County): **SG-1**, 1859; **SG-2**, **VO**, 1870-95; **Reg Sta**, 1884-85 (3d order), 1885-92 (2d order)
Fort Sumner (Guadalupe County): **SG-2**, **VO**, 1864-69
Fort Thorn (at Santa Barbara): **SG-1**, 1854-58

Fort Tularosa (Tularosa): **SG-2**, **VO**, 1873-74
Fort Union (Mora County): **SG-1**, 1851-59; **SG-2**, 1856-91; **VO**, 1860-91 (with gaps)
Fort Webster (*see* Fort McLane)
Fort West (headwaters of Gila River): **VO**, 1863
Fort Wingate (headwaters of Rio Puerco; Valencia County): **SG-2**, 1862-1911; **VO**, 1862-93 (with gaps)
Gallinas Springs (San Miguel County): **VO**, 1885-91
Hall's Peak (Mora County): **VO**, 1891
Hill's Ranch (*see also* "Red Canon"; Socorro County): **VO**, 1889-91
Hillsboro: **VO**, 1889-91
Jacques (Rio Arriba County): **VO**, 1889
Laguna: **SG-1**, 1851; **VO**, 1889-90
La Luz: **VO**, 1889-91
La Mesilla: **Reg Sta**, 1877-82 (2d order)
Lancy: **VO**, 1889
La Palrareda Tract (near Abiquiu): **VO**, 1889
Las Cruces: **SG-2**, 1865
Las Vegas: **SG-1**, 1849-51; **VO**, 1875, 1887-91
Lava: **Reg Sta**, 1884-90 (3d order)
Los Lunas: **VO**, 1889-91
Los Pinos: **SG-2**, 1862-66; **VO**, 1863-66
Magdalena: **VO**, 1889-90
Monero: **VO**, 1889-91
Nogal: **VO**, 1889-91
Ojo Caliente: **VO**, 1889
Ojo Negro (San Miguel County): **VO**, 1884-86
Olio (San Juan County): **VO**, 1891
Paso Del Norte: **SG-1**: 1850
Pojuaque (near Nambe; Santa Fe County): **VO**, 1889-91
Rayada: **SG-1**, 1851
Reads': **VO**, 1889-90
Red Canon (*see also* Hill's Ranch): **VO**, 1889-91
Rio Hondo: **VO**, 1889
Roswell: **VO**, 1889-90
San Marcial (*see* Fort Conrad and Fort Craig): **VO**, 1889- 90
San Pedro: **VO**, 1889
Santa Fe (*see also* Fort Marcy): **VO**, 1867-73; **Reg Sta**, 1871-83 (2d order), 1884-92
Silver City: **Reg Sta**, 1878-83 (2d order)
Socorro: **SG-1**, 1849-51; **VO**, 1891; **Reg Sta**, 1879-81 (2d order)
Spader's Ranch: **VO**, 1889
Springer (Colfax County): **VO**, 1891; **R**, 1888
Taos: **VO**, 1889-91
Tequesquite (*see* Albert)
Tierra Amarillo: **VO**, 1889
Tres Piedras: **VO**, 1889-90
Tularosa (*see* Fort Tularosa)
Wallace (Bernalillo County): **VO**, 1889-91

**Daily Journals and Abstracts, 1872-1907.**

Albuquerque: 1878-81
Aleman: 1879
Bayard, Fort (*see* Fort Bayard)
Bernalillo: 1879-80
Carthage: 1890-91
Contadero: 1878
Craig, Fort (*see* Fort Craig)
Cummings, Fort (*see* Fort Cummings)
Fort Bayard: 1877-83
Fort Craig: 1877-84
Fort Cummings: 1880-83
Fort Selden: 1881
Fort Stanton (*see also* Stanton, Fort): 1883-90
La Messilla: 1877-82
Las Cruces: 1878-80
Lava: 1884-90
Roswell: 1904-7
Santa Fe: 1872-1907
Silver City: 1878-83
Socorro: 1879-81
Stanton, Fort: 1891-93

**Records of Hourly Wind Movement, 1883-1904.**

Fort Stanton (*see also* Stanton, Fort): 1885-88
Roswell: 1904
Santa Fe: 1883-1904
Stanton, Fort: 1889-93

**Records of Hourly Wind Direction, 1891-1904.**

Roswell: 1904
Santa Fe: 1891-1904

**Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1849-54.**

Albuquerque: 1849-50
Cantonment Burgwin: 1854
Cebolletta: 1849-51
Dona Ana: 1851
Fernandes de Taos: 1850
Fort Conrad: 1851-54
Fort Craig: 1854
Fort Defiance: 1851-54
Fort Fillmore: 1851-54
Fort Massachusetts: 1852-54
Fort Thorne: 1854
Fort Union: 1851-54
Fort Webster: 1852-53
Las Vegas: 1850-51
Santa Fe: 1851-54
Socorro: 1849-51

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Roswell: 1905, 1906, 1907
Santa Fe: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Local Meteorology--New Mexico:

Hon. S.B. Elkins, History, Wealth, and Resources of New Mexico.
James M. Reade, Observations made during Pope's expedition.
El Paso: Curve of daily temperature.

## Operational Records

**Station Inspection Reports, 1877-1912.** Reports are arranged alphabetically by name of station, with

pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Albuquerque: 1877-81 (2)
Central City (Ft. Bayard): 1877-81 (20)
Craig, Fort: 1877-84 (17)
La Mesilla: 1877-81 (48)
Las Cruces: 1878-79 (48)
Lava: 1885-88 (48)
Los Lunas: 1877-80 (48)
Roswell: 1906-8
Santa Fe: 1872-88 (86); 1891-1912
San Marcial: 1884 (86)
Seldon, Fort: 1877 (91)
Shakespeare: 1881 (89)
Silver City: 1877-81 (87)
Socorro: 1880-81 (89)
Stanton, Fort: 1884-88 (91)
Watrous: 1885 (100)

## Climatological Records

**Consolidated List of Climatological Records, 1851-1902** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 390-396).

Ashley: **VO**, 1892
Bathgate: **VO**, 1891-92
Bismarck (*see also* Fort Abraham Lincoln): **Reg Sta**, 1874-92
Bottineau: **VO**, 1892
Carrington (*see* Sykeston)
Church's Ferry (Ramsey County): **VO**, 1891-92
Davenport: **VO**, 1888-91
Dawson: **VO**, 1892
Devils Lake: **VO**, 1884; **W**, 1897-1902
Dickinson: **VO**, 1891-92
Ellendale: **VO**, 1890-92
Fargo: **SI**, 1872; **VO**, 1873-75, 1891-92
Forman: **VO**, 1892
Fort Abercrombie (on Red River; Richland County); **SG-1**, 1859; **SG-2**, **VO**, 1860-77
Fort Abraham Lincoln (near Bismarck): **SG-2**, **VO**, 1873-91
Fort Berthold (McLean County): **SG-2**, **VO**, 1866-67
Fort Buford (near mouth of Yellowstone River): **SG-2**, **VO**, 1866-86, 1888-92; **Reg Sta**, 1879-92 (2d order)
Fort Pembina (on Red River; Pembina County): **SG-2**, **VO**, 1870-92
Fort Ramson: **SG-2**, **VO**, 1868-72
Fort Rice: **SG-2**, 1870-78; **VO**, 1868-78
Fort Seward (headwaters of James River; Stutsman County): **SG-2**, **VO**, 1873-77
Fort Stevenson (on Missouri River): **SG-2**, **VO**, 1867-83; **VO**, 1892; **Reg Sta**, 1878-83 (2d order)
Fort Totten: **SG-2**, **VO**, 1869-90; **Reg Sta**, 1883-84 (3d order), 1884-89 (2d order)
Fort Union (at mouth of Yellowstone River): **SI**, 1853-54, 1857; **Pr**, 1853-54
Fort Wadsworth (*see* Fort Sisseton, SD)
Fort Yates: **SG-2**, 1882-98; **VO**, 1882-92; **Reg Sta**, 1882-91 (3d order)
Gallatin (Griggs County): **VO**, 1888-92
Grafton: **VO**, 1891-92
Grand Forks: **VO**, 1890-92
Grand Rapids: **VO**, 1891-92
Hillsboro (*see* Hurley Farm)
Hope: **VO**, 1891-92
Hurley Farm (Traill County): **VO**, 1888, 1891
Jamestown: **VO**, 1874-75, 1891-92
Kelso: **VO**, 1890-92
Lakota: **VO**, 1891-92
Langdon: **W**, 1896-1902
Larimore: **W**, 1896-1902
Leech Farm (*see* Davenport)
Lidgerwood: **VO**, 1892
Lisbon: **W**, 1896-1902
Medora: **VO**, 1892
Milton: **VO**, 1891-92
Minot: **VO**, 1891-92
Napoleon: **VO**, 1889-92
Neche: **W**, 1896-97
New England: **VO**, 1888-91
Pembina: **SI**, 1851-52; **W**, 1898-1902; **Reg Sta**, 1872-80 (2d order)
Power (Richland County): **VO**, 1891-92
Reynolds: **VO**, 1892
Richardton: **VO**, 1884-88 (with gaps)
St. John: **VO**, 1891-92
St. Joseph (Pembina County): **SI**, 1854
St. Thomas: **VO**, 1891-92
Sanborn: **VO**, 1889-90
Seymour (Richland County): **VO**, 1892
Spiritwood: **VO**, 1891
Steele: **VO**, 1889-91
Sykeston (some observations at Carrington): **VO**, 1889, 1891-92
Tobacco Garden: **Reg Sta**, 1882-83 (3d order)

Valley City: **VO**, 1891-92
Wahpeton: **VO**, 1889-92
White Earth: **VO**, 1892
Wild Rice: **VO**, 1890-92
Willow City: **VO**, 1891-92
Woodbridge (Cavalier County): **VO**, 1891-92
Yule (Billings County): **VO**, 1892

**Daily Journals and Abstracts, 1874-1907.**

Bismarck: 1874-1907
Buford, Fort (*see also* Fort Buford: 1891-93
Devils Lake: 1904-7
Fort Buford: 1879-90
Fort Stevenson: 1878-83
Fort Totten: 1883-89
Fort Yates (*see also* Yates, Fort): 1879-90
Pembina: 1872-80
Tobacco Garden: 1882-83
Williston: 1893-1907
Yates, Fort: 1891

**Records of Hourly Wind Movement, 1881-1904.**

Bismarck: 1881-1904
Buford, Fort (*see also* Fort Buford): 1889-93
Devils Lake: 1904
Fort Buford: 1883-88
Fort Totten (*see also* Totten, Fort): 1886-88
Totten, Fort: 1889
Williston: 1893-1904

**Records of Hourly Wind Direction, 1891-1904.**

Bismarck: 1891-1904
Devils Lake: 1904
Williston: 1903-4

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Bismarck: 1905, 1906, 1907
Devils Lake: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Local Meteorology--Dakota:

A. Barnaud, Meteorological table, 1868-70.

## Operational Records

**Station Inspection Reports, 1873-1911.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Bismarck: 1875-87 (7); 1893-1911
Buford, Fort: 1880-88 (8)
Devils Lake: 1905-11
Pembina: 1873-80 (74)
Totten, Fort: 1884-87 (94)
Williston: 1894-1911
Yates, Fort: 1880-87 (103)

## Climatological Records

**Consolidated List of Climatological Records, 1824-1902** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 423-426).

Anadarko: **VO**, 1892
Ardmore: **CR**, 1901-2
Armstrong Academy (*see* Doaksville)
Baptist Mission (Creek Nation; near Micco): **SI**, 1860
Buffalo: **VO**, 1891-92
Burnett ("Burnett District"): **VO**, 1892
Caddo Creek ("Vickens District"): **VO**, 1888-90
Camp Phoenix (*see* Fort Towson)
Cantonment ("Cheyenne and Arapahoe District"): **R**, 1888; **Reg Sta**, 1881-84 (3d order, with gaps)
Cantonment North Fork Canadian River: **SG-2**, 1879
Chandler: **CR**, 1901-2
Coalgate: **VO**, 1890-91
Doaksville ("Choctaw Nation"): **SI**, 1851-53 (Armstrong Academy), 1860 (Goodwater Mission Station)
Dragoon Hospital (near Fort Gibson): **SG-1**, 1837-39
Durant: **CR**, 1901-2
Eh Yoh Hee ("Cherokee Nation"; near Tahlequah): **SI**, 1860
Enid: **W**, 1900-1902
Eufaula: **R**, 1888
Fort Arbuckle: **SG-1**, 1850-59; **VO**, 1860-61, 1867-70
Fort Gibson (*see also* Dragoon Hospital): **SG-1**, 1824-57; **SG-2**, **VO**, 1871, 1873-84, 1886-90; **Reg Sta**, 1873-82 (2d order)
Fort Reno (North Fork of Canadian River): **SG-2**, 1883-1907; **VO**, 1883-92; **Reg Sta**, 1882-91, 3d order)
Fort Sill: **VO**, 1870-79, 1889-92; **Reg Sta**, 1874-91 (2d order)
Fort Supply: **SG-2**, **VO**, 1870-94; **Reg Sta**, 1882-90 (3d order)
Fort Towson (formerly Camp Phoenix): **SG-1**, 1824-29, 1831-46, 1849-54
Fort Washita: **SG-1**, 1842-59; **VO**, 1860-61
Fort Wayne: **SG-1**, 1839-42
Gate: **VO**, 1892
Guthrie: **VO**, 1889-92
Gwenndale ("Cherokee Nation"): **VO**, 1892
Healdton: **VO**, 1890-92
Holdenville: **CR**, 1901-2
Jimtown ("Pickens District"): **VO**, 1888-89
Keokuk Falls ("B" County): **VO**, 1892
Kingfisher: **VO**, 1892
Lee's Creek ("Cherokee Nation, Tequohyah District"): **SI**, 1861
Lehigh: **VO**, 1889, 1892
Liddle ("Choctaw Nation"): **VO**, 1889
Mangum: **VO**, 1892; **CR**, 1901-2
Marlow: **CR**, 1901-2
Muskogee: **CR**, 1902
Oklahoma City: **VO**, 1889; **Reg Sta**, 1890-92 (2d order)
Pauls Valley: **VO**, 1892
Ponca City: **VO**, 1892
Purcell: **VO**, 1891-92
Sac and Fox Agency ("A" County): **VO**, 1892
Sapulpa: **VO**, 1892
Shawnee: **CR**, 1901-2
South McAlester ("Choctaw Nation"): **VO**, 1891-92
Stillwater: **VO**, 1892; **CR**, 1901-2
Tulsa: **R**, 1888
Vinita: **VO**, 1891
Waynoka: **VO**, 1892
Weatherford: **CR**, 1901-2
Winnview: **VO**, 1893
Wynne Wood: **VO**, 1891

**Daily Journals and Abstracts, 1873-1907.**

Cantonment: 1881-84
Fort Gibson: 1873-82
Fort Reno (*see also* Reno, Fort): 1883-90
Fort Sill (*see also* Sill, Fort): 1877-90
Fort Supply: 1881-90
Oklahoma City: 1890-1907
Reno, Fort: 1891
Sill, Fort: 1891

**Records of Hourly Wind Movement, 1883-1904.**

Fort Sill (*see also* Sill, Fort): 1883-88
Oklahoma City: 1890-1904
Sill, Fort: 1889-91

**Records of Hourly Wind Direction, 1897-1904.**

Oklahoma City: 1897-1904

**Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1835-54.**

Cherokee Nation
- Fort Arbuckle on Canadian River: 1851-54
- Fort Gibson: 1843-54

Choctaw Nation
- Fort Coffee: 1835-38
- Fort Towson: 1843-46, 1849-54
- Fort Washita: 1843-54

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Oklahoma [City]: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Local Meteorology--Indian Territory:

Meteorological notes obtained from conversations with Creek chiefs.
Fort Washita: Comparison of Julys, 1844-49.

## Operational Records

**Station Inspection Reports, 1874-1910.** Reports are arranged alphabetically by name of station, with

pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Cantonment: 1880 (18)
Gibson, Fort: 1874-81 (39)
Oklahoma [City]: 1891-1910
Reno, Fort: 1880-87 (80)
Sill, Fort: 1877-87 (91)
Supply, Fort: 1880-87 (92)

## Climatological Records

**Consolidated List of Climatological Records, 1849-1902** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 427-434).

Albany: **SI**, 1865-68 (near); **VO**, 1879-92
Arlington: **VO**, 1891-92
Ashland: **Reg Sta**, 1883-89 (3d order)
Astoria: **SG-1**, 1849-51; **SG-2**, 1850-51; **SI**, 1870-73; **VO**, 1874-76; **Reg Sta**, 1883-87 (3d order), 1887-88 (2d order), 1888-98 (3d order); **Pr**, 1856-70 (monthly means)
Auburn (Baker County): **SI**, 1863-65
Baker: **Reg Sta**, 1889-92 (2d order)
Bandon: **VO**, 1884-92
Beulah (Malheur County): **VO**, 1889-92
Bly: **R**, 1888
Burns: **VO**, 1890-91
Camp Drum (*see* Fort Dalles)
Camp Logan (Grant County): **SG-1**, **VO**, 1867-68
Camp Warner (Lake County): **SG-2**, 1869-74; **VO**, 1868-74
Camp Watson (on John Day River; Grant County): **SG-2**, **VO**, 1867-69
Cantonment Loring (on Snake River): **SG-1**, 1849-50
Columbia River (various points on the Columbia and Willamette Rivers): **Pr**, 1851 (U.S. Coast Survey)
Corvallis: **SI**, 1866-68
East Portland (Portland): **VO**, 1884-92
Ellensburg (*see* Gold Beach)
Empire: **VO**, 1886
Eola (Polk County): **SI**, 1870-73; **VO**, 1874-92
Fort Cascades (near Cascade City): **SG-2**, 1858
Fort Dalles (formerly Camp Drum; Wasco County): **SG-1**, 1850-54, 1856-59 (Camp Drum); **SG-2**, 1850-67; **VO**, 1860-66
Fort Harney (Harney County): **SG-2**, **VO**, 1867-80
Fort Hoskins (Yamhill County): **SG-1**, 1856-59; **SG-2**, 1856-65; **VO**, 1860-65
Fort Klamath (Klamath County): **SG-2**, **VO**, 1863-89; **Reg Sta**, 1883-89 (3d order)
Fort Lane (8 miles N. of Jacksonville): **SG-1**, 1856; **SG-2**, 1856
Fort Orford (Port Orford): **SG-1**, 1852-54, 1856; **SG-2**, 1854-56
Fort Stevens (Point Adams; Clatsop County): **SG-2**, **VO**, 1865-83; **Reg Sta**, 1883-84 (3d order)
Fort Umpqua (Umpqua): **SG-1**, 1856-59; **SG-2**, **VO**, 1856-62
Fort Yamhill (35 miles W. of Portland): **SG-1**, 1856-59; **SG-2**, 1856-66
Gardiner: **VO**, 1886-87
Gold Beach (*also* Ellensburg): **VO**, 1889-91
Grants Pass: **VO**, 1888-92
Happiness (Morrow County): **VO**, 1889-92
Happy Valley (Harney County): **VO**, 1890-92
Hood River: **SI**, 1872
Jordan Valley: **VO**, 1889-91
Joseph: **VO**, 1889-92
Klamath Agency: **VO**, 1884-85
La Grande: **VO**, 1886-89
Lakeview: **VO**, 1890-92; Reg Sta, 1883-88 (3d order)
Linkville: **Reg Sta**, 1883-89 (3d order)
McMinnville: **VO**, 1888-92
Mount Angel: **VO**, 1886-92
Mount Hood: **SI**, 1872-73
Newport (*see* Yaquina Lighthouse)
Oregon City: **SG-1**, 1849-50; **SG-2**, 1849-50; **Pr**, 1849-51
Parker: **R**, 1888
Pendleton: **VO**, 1886
Portland (*see also* East Portland): **SI**, 1859, 1870-73; **Reg Sta**, 1871-92 (1st order)

Port Orford (*see also* Fort Orford): **VO**, 1875-76
Roseburg: **Reg Sta**, 1877-92 (2d order)
Salem: **SI**, 1861, 1863-64
Siletz River (blockhouse on; Benton County): **SG-1**, 1858-59; **VO**, 1860-62
Silver Lake: **VO**, 1889-92
The Dalles: **VO**, 1891
Tillamook: **VO**, 1889-90
Umatilla: **Reg Sta**, 1877-83 (2d order)
Umpqua (*see* Fort Umpqua)
Vernonia: **VO**, 1890
Willamette River (*see* Columbia River)
Woodville (Jackson County): **VO**, 1887-88
Yaquina Lighthouse (*also* Newport): **VO**, 1887-88

**Daily Journals and Abstracts, 1871-1907.**

Ashland: 1883-89
Baker: 1889-1907
Fort Klamath: 1883-89
Fort Stevens: 1883-84
Lake View: 1883-88
Linkville: 1883-89
Portland: 1871-1907
Roseburg: 1877-1907
Umatilla: 1877-83

**Records of Hourly Wind Movement, 1881-1904.**

Astoria: 1887-88
Baker: 1889-1904
Portland: 1881-1904
Roseburg: 1883-1904

**Records of Hourly Wind Direction, 1891-1904.**

Portland: 1891-1904
Roseburg: 1892-1904

**Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1850-55.**

Astoria: 1850-51
Columbia Barracks: 1850-53
Dalles of Columbia: 1852, 1855
Fort Oxford: 1852-54
Fort Vancouver: 1850, 1853-54

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Baker City: 1905, 1906, 1907
Portland: 1905, 1906, 1907
Roseburg: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Local Meteorology--Oregon

Louis Wilson, Climate of Western Oregon, comparison of differences between meteorological observations taken at 6 a.m., 12 m., 6, 7, 2, and 9 p.m.
Astoria: Louis Wilson, Monthly means of meteorological observations, 1856-69.
Columbia River: A.M. Harrison, Meteorological register, 1851.
Corvallis: A.D. Barnard, Weather report for the winter of 1865.
Hood River: Thomas M.Whitcomb, Weather notes, September 1872.
Mount Hood Station: Thomas M. Whitcomb, Temperature observations, December 1872.
Oregon City: Rev. George M. Atkinson, Meteorological observations, 1849, 1850; Diagram of weather, December 1851.
Portland: G.H. Stebbins, Meteorological observations, December 1858-April 1859.
Salem: W. Hamilton, Meteorological report, July 1857.

**Other Miscellaneous Meteorological Material Accumulated by the Smithsonian Institution, 1848-1891.**

Local Meteorology--Oregon:

Hood River: Mrs. Coe, Temperatures for the period November 1880 to March 1881.
Oregon City: Rain per month for 1857, 1858, 1859 (to March).
Portland:
T. Frazer, Weather record for ten years, 1859-68.
"Report of the Librarian," newspaper clipping, January 1, 1870.

## Operational Records

**Station Inspection Reports, 1872-1908.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Ashland: 1874-88 (5)
Astoria: 1883-88 (5); 1892-1902
Baker City: 1891-1908
Bly: 1887 (9)
Klamath, Fort: 1884-87 (45)
Lakeview: 1887 (47)
Linkville: 1884-87 (49)
Portland: 1872-88 (74); 1893-1908
Roseburg: 1878-88 (79)
Stevens, Fort: 1883-87 (91)
Umatilla: 1878-82 (96)

## Climatological Records

**Consolidated List of Climatological Records, 1853-1902** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO: and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 468-475).

Aberdeen: **VO**, 1890-92; **W**, 1897-1902
Alexandria: **VO**, 1882-84, 1889-92
Armour: **VO**, 1889
Ashcroft (Harding County): **VO**, 1892
Bangor ("Scranton"; Walworth County): **VO**, 1889-91
Bon Homme (Bon Homme County): **SI**, 1872
Bowdle: **VO**, 1892
Britton: **VO**, 1891-1892
Brookings: **VO**, 1888-92
Brule Agency (*see* Fort Hale)
Canton: **VO**, 1889-91
Carthage: **VO**, 1892
Castlewood: **VO**, 1891-92
Cheyenne Agency (*see* Fort Bennett)
Clark: **VO**, 1889-92
Cross ("Etta Mine"; Pennington County): **VO**, 1890-92
Dakota City (Hutchinson County): **VO**, 1886
Deadwood: **Reg Sta**, 1877-87 (2d order; closed May-November 1878)
De Smet: **VO**, 1889-92
Elkton: **VO**, 1892
Etta Mine (*see* Cross)
Faulkton: **VO**, 1892; **W**, 1896-97
Firesteel: **VO**, 1875-77
Flandreau: **VO**, 1890-92
Forestburg: **VO**, 1891-92
Forest City: **VO**, 1891-92
Fort Bennett (Cheyenne Agency, Stanley County): **SG-2**, **VO**, 1889-91; **Reg Sta**, 1880-85 (2d order)
Fort Dakota (Sioux Falls): **SG-2**, **VO**, 1866-69
Fort Hale (formerly Brule Agency): **SG-2**, 1871-81; **VO**, 1879-84
Fort Meade: **VO**, 1879-93; **Reg Sta**, 1882-83 (3d order)
Fort Pierre: **SG-1**, 1853-57; **SG-2**, 1855-57; **SI**, 1853-54, 1860-61
Fort Randall (Gregory County): **SG-1**, 1856-59; **SG-2**, **VO**, 1857-92
Fort Sisseton (formerly Fort Wadsworth): **SG-2**, 1867-83; **VO**, 1866-67, 1869-89
Fort Sully: **SG-2**, **VO**, 1866-94; **Reg Sta**, 1872-77 (2d order), 1882-85 (3d order), 1885-91 (2d order)
Fort Wadsworth (*see* Fort Sisseton)
Frankfort: **VO**, 1891-92
Garden City: **VO**, 1887-89
Gary: **VO**, 1891-92
Gettysburg: **VO**, 1892
Goddard (Sully County): **VO**, 1888-89
Grand View (Douglas County): **VO**, 1888, 1892
Greenwood (*see* Yankton Indian Agency)
Henry: **VO**, 1886-87
Highmore: **VO**, 1887-88, 1890-92
Hitchcock: **VO**, 1892
Hotch City ("Presho County"): **VO**, 1892
Howard: **VO**, 1890-92
Huron: **Reg Sta**, 1881-92 (2d order)
Kimball: **VO**, 1886-92
Lead: **Reg Sta**, 1877-78 (2d order
Long Creek (Lincoln County): **VO**, 1888
Lower Brule Agency (Lyman County): **VO**, 1875-78
Macy (Butte County): **VO**, 1892
Mammoth Spring (*also* "Rapid Creek"; Pennington County): **VO**, 1883-84
Mellette: **VO**, 1892
Midland: **VO**, 1892
Milbank: **VO**, 1889-92; **W**, 1896-1902
Minnesota (Butte County): **VO**, 1891
Mitchell: **VO**, 1891-92; **W**, 1896-1902
Morriston (Davison County): **VO**: 1877-84
Oelrichs: **VO**, 1890-92

Olivet: **VO**, 1877-82
Onida: **VO**, 1889-92
Parker: **VO**, 1891-1892
Parkston: **VO**, 1887-92
Piedmont: **VO**, 1892
Pierre: **Reg Sta**, 1891-92 (2d order)
Plankinton: **VO**, 1891-92
Ponca Agency (Todd County): **SI**, 1871
Rapid City: **Reg Sta**, 1882-83 (3d order), 1888-92 (2d order)
Rapid Creek (*see* Mammoth Spring)
Redfield: **VO**, 1889; **W**, 1898-1902
Roscoe: **VO**, 1889
Rosebud Agency: **VO**, 1892
St. Lawrence: **VO**, 1890-1892
Salem: **VO**, 1892
Scranton (*see* Bangor)
Second Crossing Cheyenne River: **SI**, 1872
Sioux Falls (*see also* Fort Dakota): **VO**, 1890-92
Smithville: **Reg Sta**, 1881-83 (3d order)
Spearfish: **VO**, 1889-92
Spring Lake (Kingsbury County): **VO**, 1888-89
Travare (Roberts County): **VO**, 1892
Tyndall: **VO**, 1891-92
Vermillion: **VO**, 1884-86, 1889-92
Watertown: **VO**, 1891-92
Webster: **VO**, 1882-92
Wentworth: **VO**, 1883, 1885, 1891-92
Wessington: **VO**, 1892
Wessington Springs: **VO**, 1891-92
Whitewood: **VO**, 1892
Wicklow (Lake County): **VO**, 1882-83
Wolsey: **VO**, 1889-92
Woonsocket: **VO**, 1885-90
Yankton: **VO**, 1891; **Reg Sta**, 1873-1892 (2d order)
Yankton Indian Agency (near Greenwood): **SI**, 1859-62, 1865

**Daily Journals and Abstracts, 1872-1907.**

Deadwood: 1877-87
Fort Bennett: 1880-85
Fort Meade: 1883
Fort Sully (*see also* Sully, Fort): 1872-90
Huron: 1881-1907
Pierre: 1891-1907
Rapid City: 1881-83, 1888-1907
Sully, Fort: 1891
Wicklow: 1882
Yankton: 1873-92, 1897-1907

**Records of Hourly Wind Movement, 1883-1904.**

Deadwood: 1884-87
Fort Bennett: 1884-85
Fort Sully (*see also* Sully, Fort): 1885-88
Huron: 1883-1904
Pierre: 1891-1904
Rapid City: 1888-1904
Sully, Fort: 1889-91
Yankton: 1883-1904

**Records of Hourly Wind Direction, 1892-1904.**

Huron: 1892-1904

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Huron: 1905, 1906, 1907
Pierre: 1905, 1906, 1907
Rapid City: 1905, 1906, 1907
Williston: 1905, 1906, 1907
Yankton: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Local Meteorology--Dakota:

A. Barnaud, Meteorological table, 1868-70.

## Operational Records

**Station Inspection Reports, 1873-1908.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Bennett, Fort: 1880-85 (8)
Deadwood: 1878-87 (26)
Huron: 1884-87 (40); 1890-1908
Meade, Fort: 1880 (53)
Pierre: 1894-1908
Rapid City: 1880-88 (79); 1891-1908
Sisseton, Fort: 1884 (91)
Sully, Fort: 1873-87 (92)
Yankton: 1873-87 (102); 1890-1908

## Climatological Records

**Consolidated List of Climatological Records, 1836-1902** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 484-507).

Abilene: **Reg Sta**, 1885-92 (2d order)
Albany: **VO**, 1892
Alice: **VO**, 1892
Amarillo: **Reg Sta**, 1892 (2d order)
Aransas: **SI**, 1860
Arlington: **VO**, 1891-92
Aurora: **VO**, 1892
Austin: **SG-1**, 1849, 1851-52; **SG-2**, 1866-75; **SI**, 1852-71, 1873; **VO**, 1866-67, 1870-92; **CR**, 1883-87; **Pr**, 1863-69
Baird: **VO**, 1889
Ballinger: **CR**, 1895-1902
Barnesville (Johnson County): **VO**, 1883-84
Bastrop: **SI**, 1859
Beaumoont: **CR**, 1883-1902
Beeville: **CR**, 1895-1902
Bellona (near Bremond): **SI**, 1869-1870
Belton: **CR**, 1883-95
Benjamin: **VO**, 1889
Berlin (Erath County): **VO**, 1890-91
Big Spring: **VO**, 1891-92
Blanco: **CR**, 1900-1902
Blue Branch: **SI**, 1870
Bluff Settlement (Fayette County): **SI**, 1870-73; **VO**, 1874
Boerne: **SI**, 1872-73 (2 miles NW. of); **VO**, 1892; **Reg Sta**, 1876-80 (2d order)
Bonham: **SI**, 1859
Boston: **SI**, 1859-61
Brackettville (*see also* Fort Clark): **Reg Sta**, 1876-81 (2d order), 1882-83 (3d order)
Brady: **VO**, 1889-92
Brandon: **VO**, 1890
Brazoria: **VO**, 1889-92
Bremond (*see* Bellona)
Brenham: **SG-2**, 1868-70; **VO**, 1889-92; **CR**, 1885-1902
Brownsville (*see also* Fort Brown): **Reg Sta**, 1875-92 (2d order)
Brownwood: **VO**, 1889-92; **CR**, 1892
Buffalo Springs: **VO**, 1867-68
Burkeville: **SI**, 1861
Burnet: **VO**, 1890-92; **CR**, 1884-1901
Caddo Peak (Johnson County): **VO**, 1889-90
Camp Almos (near San Antonio): **SG-1**, 1846
Camp Colorado (6 miles N. of Colorado River): **SG-1**, 1856-59; **SG-2**, 1856-59; **VO**, 1860-61
Camp Conception (San Antonio): **SG-1**, 1846
Camp Concordia (near Fort Bliss): **VO**, 1868-1869
Camp Cooper (Throckmorton County): **SG-1**, 1857-59
Camp Crawford (*see* Fort McIntosh)
Camp Del Rio (near Del Rio): **SG-2**, **VO**, 1890-91
Camp Eagle Pass (*see also* Eagle Pass): **SG-2**, 1889-1901; **VO**, 1889-93
Camp Hudson (on Devils River): **SG-1**, 1858-59; **VO**, 1860-61
Camp Ives (4 miles from Camp Verde): **SG-1**, 1859
Camp Johnston (*see* Fort Chadbourne)
Camp Kelly (*see* Fort Concho)
Camp Nacogdoches (Nacogdoches): **SG-1**, 1836
Camp Pena Colorado (near Marathon): **SG-1**, **VO**, 1889-93
Camp Verde (60 miles NW of San Antonio): **SG-1**, 1856-58; **SG-2**, 1867-69; **VO**, 1857-69 (summary), 1860-61, 1867-69
Camp Wilson (*see* Fort Griffin)
Castroville: **Reg Sta**, 1877-82 (2d order)
Cedargrove (near Columbia): **SI**, 1867-69
Cedar Hill: **VO**, 1887, 1889
Chapel Hill: **SI**, 1866-67

Childress: **VO**, 1889-92
Clarksville (*see also* Repose): **SI**, 1870-73; **VO**, 1874-85
Clear Creek (*see* Clearlake)
Clear Fork of the Brazos (*see* Fort Phantom Hill)
Clearlake (*also* "Clear Creek"): **SI**, 1871
Cleburne: **VO**, 1880-81, 1883-89
Clinton: **SI**, 1869-72
Coldwater (Sherman County): **VO**, 1889-92
Coleman City: **Reg Sta**, 1877-83 (2d order)
College Station: **VO**, 1882, 1887, 1889-92
Colorado: **VO**, 1889-92
Columbia (*see also* Cedargrove): **VO**, 1891; **CR**, 1884-1901
Columbus: **SI**, 1859; **VO**, 1873-74
Comanche: **VO**, 1887, 1889
Comanche Agency (Infantry camp near): **SG-1**, 1859
Comfort: **VO**, 1876, 1885-87
Content (near): **SI**, 1873
Corpus Christi: **SG-1**, 1846, 1851, 1854, 1856; **VO**, 1880-81, 1885; **Reg Sta**, 1887-92 (2d order)
Corsicana: **VO**, 1885-92; **CR**, 1883-1902; **Reg Sta**, 1874-81 (2d order)
Cross Roads (Williamson County): **SI**, 1859-60
Cuero: **VO**, 1891-92; **CR**, 1883-1902
Dallas: **SI**, 1859; **VO**, 1887, 1889-92; **CR**, 1883-1902
Decatur: **VO**, 1887-90; **Reg Sta**, 1877-82 (2d order)
Deloraine (4 miles from Greenville): **SI**, 1871-73
Del Rio (*see* Camp Del Rio)
Denison: **Reg Sta**, 1875-83 (2d order)
Devine: **VO**, 1892
Dinburg: **VO**, 1877
Dripping Springs: **VO**, 1889
Dublin: **CR**, 1895-1902
Durham (Borden County): **VO**, 1889-92
Duval (Travis County): **VO**, 1889-92
Eagle Pass (*see also* Camp Eagle Pass and Fort Duncan): **Reg Sta**, 1876-1883 (2d order)
Eastland: **VO**, 1892
Edinburg: **R**, 1888; **Reg Sta**, 1878-82 (2d order)
El Paso (*see also* Fort Bliss): **SG-1**, 1850-51; **Reg Sta**, 1878-92 (2d order)
Epworth (Hale County): **VO**, 1889-92
Fay: **VO**, 1892
Flatonia: **VO**, 1878
Flower Bluff (Nueces County): **VO**, 1892
Floydada: **VO**, 1892
Forestburg: **VO**, 1889-92
Fort Belknap (Red Fork of Brazos River): **SG-1**, 1851-54, 1856-59
Fort Bliss (El Paso): **SG-1**, 1854-59; **SG-2**, **VO**, 1860-76, 1879-92
Fort Brown (Brownsville): **SG-1**, 1849-54, 1856-59; **VO**, 1860-61, 1869-82, 1884-85, 1889-92
Fort Chadbourne (formerly Camp Johnston): **SG-1**, 1852-54, 1856-59; **SG-2**, 1867; **VO**, 860-61
Fort Clark (near Brackettville): **SG-1**, 1852-54, 1856-59; **VO**, 1860-61, 1870-78, 1886, 1888-93
Fort Concho (formerly Camp Kelly): **SG-2**, 1868; **SG-2**, **VO**, 1868-89; **Reg Sta**, 1877-85 (2d order)
Fort Croghan (Hamilton Creek): **SG-1**, 1849-53
Fort Davis (*see also* Presidio): **SG-1**, 1854, 1856-59; **SG-2**, 1869-81, 1888-91; **VO**, 1860-61, 1869-73 (with gaps), 1874, 1875, 1877-81 (with gaps), 1889-91; **Reg Sta**, 1878-88 (2d order)
Fort Duncan (*see also* Camp Eagle Pass and Eagle Pass): **SG-1**, 1849-54, 1856-59; **SG-2**, 1870-81; **VO**, 1860-61, 1873-79
Fort Elliott (Sweetwater Creek): **SG-2**, **VO**, 1877-90; **Reg Sta**, 1879-90 (2d order)
Fort Ewell (Nueces River): **SG-1**, 1852-54
Fort Gates (Leon River): **SG-1**, 1849-52
Fort Gerrett (North Fork of the Llano River): **SG-1**, 1852-53

Fort Graham (14 miles from Hillsboro): **SG-1**, 1850-53
Fort Griffin (formerly Camp Wilson): **SG-2**, **VO**, 1868-81; **Reg Sta**, 1877-82 (2d order)
Fort Hancock: **SG-2**, **VO**, 1889-1895
Fort Inge (on Leon River; Uvalde County): **SG-1**, 1849-54, 1858-59; **VO**, 1860-61, 1868
Fort Lancaster (Pecos River): **SG-1**, 1856-59; **VO**, 1860-61
Fort Lincoln (on Rio Seco): **SG-1**, 1849-52
Fort McIntosh (formerly Camp Crawford; near Laredo): **SG-1**, 1849-54, 1856-59; **VO**, 1869-76 (with gaps), 1886-93
Fort McKavett: **SG-1**, 1852-54, 1856-59; **SG-2**, 1869-83; **VO**, 1869-70, 1872-88; **Reg Sta**, 1877-83 (2d order)
Fort Martin Scott (near Fredericksburg): **SG-1**, 1849-52
Fort Mason (on Comanche Creek); **SG-1**, 1852-53, 1856-59; **VO**, 1860-61
Fort Merrill (on Nueces River): **SG-1**, 1851-54
Fort Phantom Hill (Post on the Clear Fork of the Brazos River): **SG-1**, 1851-54
Fort Polk (Point Isabel): **SG-1**, 1849-50
Fort Quitman (on Rio Grande): **SG-1**, 1858-59; **SG-2**, 1870-75; **VO**, 1860-61, 1870-74
Fort Richardson (near Jacksboro); **SG-2**, 1867-78; **VO**, 1868-70, 1872-78
Fort Ringgold (near Rio Grande City): **SG-1**, 1849-1854, 1856-59; **SG-2**, 1870-99; **VO**, 1860-61, 1870-82 (with gaps), 1886-93 (with gaps)
Fort Sam Houston (San Antonio): **VO**, 1860-61, 1870-73, 1888-92
Fort Stockton (Pecos County): **SG-1**, 1859; **SG-2**, 1868-77; **VO**, 1860-61, 1877; **Reg Sta**, 1877-86 (2d order)
Fort Worth: **SG-1**, 1849-53; **SG-2**, 1849-53; **VO**, 1889-92
Franklin: **SG-2**, 1864-65; **VO**, 1865
Fredericksburg (*see also* Fort Martin Scott): **VO**, 1889-92; **Reg Sta**, 1877-83 (2d order)
Gainesville: **VO**, 1889-92
Gallinas (Bexar County): **VO**, 1889-92
Galveston: **SG-2**, 1867-70; **SI**, 1852, 1867, 1869; **VO**, 1868-70; **CR**, 1883-88; **Reg Sta**, 1871-92 (1st order); **Pr**, 1865 (A.M. Potter)
Gatesville: **VO**, 1879
Gilmer: **SI**, 1859-61, 1867-73; **VO**, 1874-79
Goliad: **SI**, 1858, 1868 ("San Antonio River")
Gonzales: **SI**, 1859-61
Graham: **VO**, 1880, 1889-92; **Reg Sta**, 1877-79 (2d order), 1882-83 (3d order)
Granbury: **VO**, 1889
Grapevine: **VO**, 1890-92
Greenville (*see also* Deloraine): **SI**, 1859-60; **CR**, 1902
Grierson: **Reg Sta**, 1882 (3d order)
Hallettsville: **VO**, 1891-92
Hansford (Hansford County): **VO**, 1890-91
Hartley: **VO**, 1889-92
Haskell: **VO**, 1890-92
Haymond: **VO**, 1891-92
Hearne: **VO**, 1889-90; **CR**, 1886-1902
Helena: **SI**, 1857
Hempstead: **CR**, 1883-84
Henrietta: **CR**, 1895-1902; **Reg Sta**, 1878-83 (2d order)
Highlands: **SI**, 1872-73; **VO**, 1891-92
Honey Grove: **VO**, 1883-85
Houston: **SG-2**, 1862-63; **SI** 1867-73; **VO**, 1874-76; **CR**, 1883-1902; **Pr**, 1849-70, 1862-65
Howe: **VO**, 1889-90
Huntsville: **SI**, 1851-52, 1854; **VO**, 1885-86, 1890: **CR**, 1883-1902
Indianola: **VO**, 1868; **Reg Sta**, 1872-86 (2d order)
Ingersol (Bowie County): **VO**, 1889
Jacksboro (*see also* Fort Richardson): **Reg Sta**, 1877-1883
Jefferson: **SG-2**, 1869-71; **SI**, 1859; **VO**, 1869-71
Kaufman: **SI**, 1859, 1866
Kent: **VO**, 1891-92
Kerrville: **CR**, 1895-1902

La Grange: **VO**, 1889-92
Lampasas: **VO**, 1889-91; **CR**, 1895-1902
Laredo (*see also* Fort McIntosh): **Reg Sta**, 1876-81 (2d order), 1882-1883 (3rd order)
Larissa College (Cherokee County): **SI**, 1858-59
Lavaca (Calhoun County): **SI**, 1869-70
Leakey: **VO**, 1892
Liberty: **VO**, 1891
Livingston: **SG-2**, 1869-70
Llano: **VO**, 1891-92
Lockhart: **SI**, 1869-70, 1872
Long Point: **SI**, 1867
Longview: **VO**, 1889-90; **CR**, 1883-1902
Lozier (Pecos County): **VO**, 1891
Lufkin: **CR**, 1895-97
Luling: **VO**, 1891; **CR**, 1883-1902
McGregor: **VO**, 1892
Marathon (*see* Camp Pena Colorado)
Marshall: **VO**, 1892
Mason: **Reg Sta**, 1877-83 (2d order), 1883 (3d order)
Melissa: **VO**, 1874-81
Menahaus: **VO**, 1891
Menard: **VO**, 1889-92
Merkel: **VO**, 1889-91
Mesquite: **VO**, 1874-77 (with gaps), 1879-80, 1887-92
Mexia: **VO**, 1889
Miami: **Reg Sta**, 1888 (3d order)
Midland: **VO**, 1885-87, 1891
Mine Creek (Burleson County): **SI**, 1869, 1871-73, 1872-73 ("Blue Branch")
Mountain Springs (Coke County): **VO**, 1890-92
Nacogdoches (*see also* Camp Nacogdoches): **VO**, 1892; **CR**, 1902
Navasota: **VO**, 1889
New Braunfels: **SI**, 1856-59; **VO**, 1889-92
New Ulm: **SI**, 1872-73; **VO**, 1874-87, 1889-92
New Wild (Comal County): **SI**, 1851-56
Oakland (Clear Creek Academy): **SI**, 1860, 1870-72
Ochiltree (Ochiltree County): **VO**, 1889-92
Odessa: **VO**, 1891-92
Orange: **VO**, 1892, **CR**, 1883-98
Painted Cave (Val Verde County): **VO**, 1891
Palestine: **SI**, 1869-70; **CR**, 1883-88; **Reg Sta**, 1881-92 (2d order)
Panhandle: **VO**, 1889-91
Panter (Hood County): **VO**, 1890-92
Paris: **VO**, 1889; **CR**, 1883-1902
Pecos: **VO**, 1889
Pike (Collin County): **VO**, 1890
Pilot Point: **Reg Sta**, 1877-81 (2d order)
Pine Mills (Wood County): **VO**, 1889
Plano: **SI**, 1869
Port Lavaca: **SI**, 1859
Post Lamsosas (San Antonio): **SG-2**, 1869-73
Presidio (Subpost of Fort Davis): **SG-2**, **VO**, 1881-83
Quanah: **VO**, May 1891-92
Repose (near Clarksville): **SI**, 1871-72)
Ringgold Barracks (*see* Fort Ringgold)
Rio Grande City (*see also* Fort Ringgold): **Reg Sta**, 1876-1891 (with gaps, 2d order), 1883 (3d order)
Roby: **VO**, 1889, 1891-92
Rockport: **VO**, 1892
Rosston: **VO**, 1890
Round Rock, **VO**, 1889-92
Round Top (2 miles SE. of): **SI**, 1860-61
St. Joseph's Island: **SG-1**, 1846
San Angelo: **VO**, 1891-92
San Antonio (*see also* Camp Almos, Camp Conception, Fort Sam Houston, and Post Lamosas): **SG-1**, 1849-52, 1857-59; **SG-2**, 1868-71, 1888-92; **SI**, 1851, 1870-73; **VO**, 1891-92; **CR**, 1883-88; **Reg Sta**, 1876-92 (2d order; closed June 1883-Feb. 1885)
Sanderson: **VO**, 1891
Sand Fly: **SI**, 1870, 1872
San Marcos: **CR**, 1874-1902
San Patricio: **SI**, 1859-60
Santa Maria: **R**, 1888
Seguin: **SI**, 1872
Seymour: **VO**, 1892

Sherman: **CR**, 1891-1902
Sierra Blanca: **VO**, 1890-92
Silver Falls (Crosby County): **VO**, 1886-92
Sisterdale: **SI**, 1859
Snyder Pass (Scurry County): **VO**, 1889, 1891
Sourlake: **CR**, 1883-88
Springfield: **SI**, 1859
Sugar Land: **VO**, 1889-92
Sulphur Springs: **VO**, 1879, 1892
Tarrant: **SI**, 1859-60
Temple: **VO**, 1891-92; **CR**, 1896-1902
Terrell: **VO**, 1876, 1878-79
Texana (Jackson County): **SI**, 1859
Texarkana: **VO**, 1886
Turner's Point (Kaufman County): **SI**, 1861
Twohig (La Salle County): **VO**, 1892
Tyler: **VO**, 1889-92; **CR**, 1883-1902
Union Hill (Washington County): **SI**, 1857-61 (with gaps)
Uvalde: **Reg Sta**, 1877-83 (2d order), 1882-1883 (3d order)
Van Horn: **VO**, 1891-92
Venus (Johnson County): **VO**, 1890
Victoria: **SI**, 1871; **VO**, 1889, 1891-92
Waco: **SI**, 1867-69; **VO**, 1874-75, 1889-90, 1892; **CR**, 1883-1902
Washington: **SI**, 1856-59
Waxahachie: **CR**, 1902
Weatherford: **VO**, 1890-91; **CR**, 1883-1902
Webberville: **SI**, 1859 ("Parsons Seminary"), 1861
Weimar: **CR**, 1883-87
harton: CR, 1902
Wheelock: SI, 1859-61
Wichita Falls: **VO**, 1890-93
Woodboro (Grayson County): **SI**, 1859-60
Yorktown: **VO**, 1879

**Daily Journals and Abstracts, 1871-1907.**

Abilene: 1885-1907
Amarillo: 1892-1907
Boerne: 1877-80
Brackettville: 1876-83
Brownsville: 1877-92
Cambridge: 1877-78
Castroville: 1877-82
Coleman City: 1877-83
Corpus Christi: 1887-1907
Corsicana: 1874-81
Decatur: 1877-82
Del Rio: 1905-7
Denison: 1877-83
Eagle Pass: 1877-83
Edinburg: 1879-82
El Paso: 1878-1907
Fort Concho: 1877-85
Fort Davis: 1878-88
Fort Elliott: 1879-90
Fort Griffin: 1877-82
Fort McKavett: 1877-83
Fort Quitman: 1881-82
Fort Stockton: 1877-86
Fort Worth: 1898-1907
Fredericksburg: 1877-83
Galveston: 1871-1907
Graham: 1877-79
Grierson Springs: 1881-82
Henrietta: 1878-83
Indianola: 1872-86
Jacksboro: 1877-83
Laredo: 1876-83
Mason: 1877-83
Palestine: 1881-1907
Pilot Point: 1877-81
Rio Grand City: 1876-91
San Antonio: 1877-1907
Taylor: 1901-7
Uvalde: 1877-83

**Records of Hourly Wind Movement, 1877-1904.**

Abilene: 1885-1904
Amarillo: 1892-1904
Brownsville: 1881-92
Corpus Christi: 1887-1904
Elliott, Fort (*see also* Fort Elliott): 1889-90
El Paso: 1881-1904
Fort Concho: 1884-85
Fort Davis: 1884-88
Fort Elliott (*see also* Elliott, Fort): 1883-88
Fort Stockton: 1884-86
Fort Worth: 1900-1904
Galveston: 1881-1904
Indianola: 1884-86
Palestine: 1883-1904
Rio Grande City: 1877, 1884-91
San Antonio: 1883, 1886-1904
Taylor: 1901-4

**Records of Hourly Wind Direction, 1891-1904.**

Abilene: 1892-1900
Amarillo: 1902-4
El Paso: 1892-1904
Fort Worth: 1900-1904
Galveston: 1891-1904
Palestine: 1902
San Antonio: 1901-4

**Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1845-54.**

Austin: 1851
Camp Belknap Brazos: 1851
Camp Crawford: 1849
Camp McKavett: 1852
Camp S.E. Johnston: 1852
Clear Fork of Brazos River, Phantom Hill: 1852
Corpus Christi: 1845-46, 1851, 1854
Fort Belknap: 1852-54
Fort Bliss: 1854
Fort Brown: 1849-54
Fort Chadbourne: 1852-54
Fort Clark, Los Moras: 1852-54
Fort Croghan: 1849-53
Fort Davis: 1854
Fort Duncan, Eagle Pass: 1849-54
Fort Ewell: 1852-54
Fort Gates: 1849-51
Fort Genett: 1849-51
Fort Graham, Jose Maria Village: 1850-53
Fort Inge: 1850-54
Fort Lincoln: 185-52
Fort McKavett: 1853-54
Fort McIntosh: 1850-54
Fort Martin Scott: 1850-52
Fort Mason: 1852-53
Fort Merrill: 1851, 1853-54
Fort Polk Point Isabel: 1849
Fort Terrett: 1852
Fort Worth: 1849-53
Fredericksburg: 1849
New Post, Red Fork Rio Llano: 1851-52
Phantom Hill: 1851-52
Post on Clear Fork, Brazos: 1853
Ringgold Barracks: 1849-54
San Antonio: 1849-52
St. Joseph's Island: 1846

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Abilene: 1905, 1906, 1907
Amarillo: 1905, 1906, 1907
Corpus Christi: 1905, 1906, 1907
Del Rio: 1905, 1906, 1907
El Paso: 1905, 1906, 1907
Fort Worth: 1905, 1906, 1907
Galveston: 1905, 1906, 1907
Palestine: 1905, 1906, 1907
San Antonio: 1905, 1906, 1907
Taylor: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Meteors:

C.G. Forshey, Meteors observed at Galveston, November 1866.
Dr. W.H. Gantt, Meteors observed at Chapel Hill, November 1866.

Rain:

D. Bache, Account of hailstorm at San Antonio, May 1868.
R.E. Talbot, Account of snowstorm, February 3, 1868, at Georgetown.

Local Meteorology--Texas:

Climate of Texas (Texas, the Home for the Emigrant, Austin, 1873).
Austin: J. Van Nostrand, Meteorological observations, 1857-70.
Burkeville: N.P. West, Table of the weather, August 1850-December 1859.
Clarksville: John Anderson, Temperature notes, October and December 1869.
Dallas: W.A. Ferris, Meteorological report, June 1851-August 1852.
Galveston: Curves of barometer and thermometer, October-December 1851, February 1853.
Houston:
  J.H. Stanley, Meteorological observations, December 1869, April-October 1870; Meteorological reports, May 1869-March 1870.
  Dr. A.M. Potter, Meteorological observations, 1862-66.
  Meteorological tables, September 1862-January 1863.
  Miss E. Baxter, Weather notes, March 1867.
Lavaca: L.D. Henton, Meteorological report, December 1868, January 1869.
Oakland: F. Simpson, Weather notes, February, March 1871.
Pin Oak: W.H. Gantt, Meteorological table, 1856.
Red River County: Allen Martin, Meteorological observations, July 1871.
Roundtop: Meteorological table, 1859.
San Antonio:
  F. Pettersen, Chart showing rate of mortality, mean temperature, and relative humidity of air, 1873; Mean temperature and rain, 1868-71; Table of mean temperature, humidity, and rainfall,

1873; Table showing number of times wind blew from each direction in 1873; Wind's progress represented by a polygon.
Mean temperature, humidity, and rain, 1873.
Washington: Memorandum for 1856

**Other Miscellaneous Meteorological Material Accumulated by the Smithsonian Institution, 1848-1891.**

Local Meteorology--Texas:

Austin: Register of weather for August 1865.
Brownsville: "The Late Storm," November 16, 1867 (newspaper clipping.
Content: F. Simpson, Letter, March 1, 1873.
Dallas: M. Murphy, Newspaper clippings about the weather, March 1873.
Galveston: Meteorological record for January and February, 1853.
Helena: J. Brightman, Letter, December 2, 1856.
Highland: T.M. Scott, Letter, March 3, 1873.
Huntsville: T. Gibbs, Rainfall during 1859.
Marshall: "Texas, Heavy Rains, Track-Laying," (May 17, year not given, newspaper clipping).

## Operational Records

**Station Inspection Reports, 1871-1912.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Abilene: 1885-88 (1); 1890-1923
Amarillo: 1900-12
Boerne: 1877-80 (9)
Brackettville: 1877-82 (9)
Brownsville: 1877-88 (10)
Concho: 1877-85 (17)
Coleman City: 1877-83 (20)
Corsicana: 1874-81 (25)
Castroville: 1877-80 (25)
Corpus Christi: 1888 (25); 1890-1908
Davis, Fort: 1880-88 (26)
Decatur: 1877-80 (27)
Del Rio: 1906-8
Denison: 1877-82 (28)
Eagle Pass: 1877-83 (35)
Edinburg: 1877-80 (34)
El Paso: 1878-88 (33); 1893-1908
Elliott, Fort: 1880-87 (34)
Fort Worth: 1900-12
Fredericksburg: 1877-80 (36)
Galveston: 1871-88 (37); 1893-1912
Graham: 1877-82 (38)
Griffin: 1877-81 (39)
Henrietta: 1877-87 (40)
Houston: 1912
Indianola: 1872-85 (42)
Jacksboro: 1877-82 (43)
Laredo: 1877-82 (48)
McKavitt, Fort: 1877-80 (53)
Marfa: 1883-87 (54)
Mason: 1877-80 (54)
Palestine: 1884-88 (70); 1893-1912
Pilot Point: 1877-80 (71)
Rio Grande City: 1877-88 (79)

San Antonio: 1877-89 (85); 1893-1908
Stockton, Fort: 1877-85 (92)
Taylor: 1904-12
Uvalde: 1877-80 (96)

## Climatological Records

**Consolidated List of Climatological Records, 1854-1892** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 508-511).

Alta (Salt Lake County): **VO**, 1889-91
Beaver: **VO**, 1889-92
Bingham (Salt Lake County): **VO**, 1889-92
Brock: **Reg Sta**, 1888-89 (3d order)
Camp Floyd (*see* Fort Crittenden)
Camp Scott (on Blacks Fork of Green River): **SG-1**, 1857-58
Castlegate: **VO**, 1891-92
Cisco: **VO**, 1891-92
Coalville: **SI**, 1869-73; **VO**, 1874-83
Corinne: **Reg Sta**, 1871-74 (2d order)
Deseret: **VO**, 1891-92
Fillmore: **VO**, 1892
Fort Crittenden (formerly Camp Floyd; Cedar Valley): **SG-1**, 1858-59; **SG-2**, **VO**, 1858-61
Fort Douglas: **SG-2**, 1889-92; **SI**, 1871; **VO**, 1862-83, 1889-92
Fort Duchesne: **VO**, 1889-93; **Reg Sta**, 1887-89 (2d order)
Fort Thornburgh (at junction of Duchesne and Greene Rivers): **SG-2**, 1881-83; **Reg Sta**, 1884 (3d order)
Frisco: **Reg Sta**, 1885-87 (2d order)
Grafton (Kane County): **SI**, 1865-66
Green River: **VO**, 1891-92
Grouse Creek: **VO**, 1890-92
Harrisburg (Washington County): **SI**, 1867-72
Heberville (Washington County): **SI**, 1861
Kanab: **SI**, 1872-73; **VO**, 1874-79
Lake Park (Davis County): **VO**, 1888-92
Levan: **VO**, 1889-92
Loa: **VO**, 1892
Logan: **VO**, 1883-84, 1890-92
Losee (Garfield County): **VO**, 1889-92
Manti: **VO**, 1892
Moab: **VO**, 1889-92
Mount Carmel: **VO**, 1874-78, 1889-92
Mount Pleasant: **VO**, 1889-91
Nephi: **VO**, 1883-85, 1889-92
Ogden: **VO**, 1889-92
Park City: **VO**, 1889-92
Parowan: **VO**, 1890-92
Price: **R**, 1888
Provo: **VO**, 1889-92
Randolph: **VO**, 1892
Richfield: **VO**, 1889-92
Rockville: **SI**, 1866
St. George: **SI**, 1862-66, 1869-70; **VO**, 1880, 1889-92
Salt Lake City: **SG-1**, 1854; **SI**, 1857-59, 1861, 1863-73; **SI**, 1872-73; **VO**, 1882; **Reg Sta**, 1874-92 (1st order)
Scofield: **VO**, 1891-92
Snowville: **VO**, 1889-92
Soldier Summit: **VO**, 1891-92
Spring Lake (Utah County): **VO**, 1875
Stockton: **VO**, 1889-92
Taylor's Ranch (Emery County): **Reg Sta**, 1889-91 (3d order)
Teasdale: **VO**, 1891
Thistle: **VO**, 1892
Tonaquint (Washington County): **SI**, 1861-62
Uintah (Weber County): **VO**, 1890-91
Vineland (Washington County): **SI**, 1864
Wanship: **SI**, 1866-69

**Daily Journals and Abstracts, 1871-1907.**

Brock's Ranch: 1888-89
Cedar City: 1899-1900

Corinne: 1871-74
Duchesne, Fort (*see also* Fort Duchesne): 1891
Fort Duchesne: 1887-90
Fort Thornburg: 1883-84
Frisco: 1885-87
Modena: 1900-1907
Salt Lake City: 1874-1907
Taylor's Ranch: 1889-91
Young's Springs: 1883-84

**Records of Hourly Wind Movement, 1885-1904.**

Duchesne (*see also* Fort Duchesne): 1889-91
Fort Duchesne: 1887-88
Frisco: 1885-87
Modena: 1901-4
Salt Lake City: 1884-1904

**Records of Hourly Wind Direction, 1891-1904.**

Cedar City: 1899-1900
Modena: 1903-4
Salt Lake City: 1891-1904

**Hourly Observations Made at Equinoxes and Solstices at Military Posts, 1854.**

Salt Lake City: 1854

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Modena: 1905, 1906, 1907
Salt Lake City: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Local Meteorology--Utah

David A. Burr, Meteorological journal of a journey from Fort Leavenworth to Salt Lake City, 1855.
Coalville: T. Bullock, Register of maximum and minimum temperature, 1869, and September 1871-January 1872.
Harrisburgh: James Lewis, Weather report, February, March, 1872.
Mount Carmel:
C.E. Bolton, Weather report, December 1871-January 1872.
W.J. Earl, Weather report, October 1873.
D.B. Fackrell, Weather report, February 1873.

St. Mary's: Thomas Bullock, Register of maximum and minimum temperature, June 1865.
Salt Lake City:
Captain Stansbury, Meteorological observations, 1850.
William Fuller, Weather report, 1868.

**Other Miscellaneous Meteorological Material Accumulated by the Smithsonian Institution, 1848-1891.**

Local Meteorology--Utah:

Salt Lake City: W. Fuller, Letter, December 28, 1867.

## Operational Records

**Station Inspection Reports, 1877-1912.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Brock's Ranch: 1888 (10)
Corinne: 1872 (24)
Duchesne, Fort: 1887-88 (26)
Frisco: 1886-87 (36)
Modena: 1902-12
Salt Lake City: 1874-88 (83); 1890-1911

## Climatological Records

**Consolidated List of Climatological Records, 1849-1898** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 530-538).

Aberdeen: **VO**, 1891-92
Ainsworth (Franklin County): **VO**, 1884
Almota: **Reg Sta**, 1882-83 (3d order)
Anacortes: **VO**, 1892
Bainbridge Island (Kitsap County): **VO**, 1878-87
Bellingham Bay (*see* Fort Bellingham)
Blakeley (Kitsap County) **VO**, 1879, 1886-91
Camp Pickett (*see* San Juan Island)
Camp San Juan (*see* San Juan Island)
Camp Semiahmoo: **SG-1**, 1859 (Semiahmoo Bay); **SG-2**, 1859-60; **VO**, 1860; **Pr**, 1857-61 (U.S. Boundary Survey)
Camp Steele (*see* San Juan Island)
Cantonment Jordan (in valley of San Francisco Borgia): **SI**, 1859 (Wagon Road Expedition)
Cape Disappointment (*see* Fort Canby)
Cascade City (*see* Fort Cascades)
Cathlamet: **SI**, 1870-73: **VO**, 1874-76
Centerville: **VO**, 1892
Chehalis: **VO**, 1890-92
Chelan: **VO**, 1891-92
Clallam Bay (*see* East Clallam)
Clyde (Walla Walla County): **VO**, 1892
Colfax: **VO**, 1892; **Reg Sta**, 1881-82 (3d order), 1882-83 (3d order)
Columbia Barracks (*see* Vancouver Barracks)
Coulee City: **VO**, 1891-92
Dayton: **VO**, 1891-92; **Reg Sta**, 1879-85 (2d order)
Doebay (*see* Olga)
East Clallam: **Reg Sta**, 1892-96 (3d order)
Eastsound: **VO**, 1890-92
Eatonville (*also* "Palisadi Farm"): **VO**, 1892
Ellensburg (*also* "Pleasant Grove"): **VO**, 1884-86, 1892
Fairhaven (Whatcom County): **VO**, 1890
Ferry: **VO**, 1892
Fort Bellingham (Bellingham Bay): **SG-2**, 1857-59
Fort Canby (formerly Fort Cape Disappointment): **SG-2**, 1871-75, 1880-83, 1889-92; **VO**, 1864-69, 1871-75 (with gaps), 1875-83, 1889-92; **Reg Sta**, 1883-92 (2d order)
Fort Cape Disappointment (*see* Fort Canby)
Fort Cascades (near Cascade City): **SG-2**, 1858-61; **VO**, 1860-61
Fort Chehalis (Grays Harbor): **SG-2**, 1857-61; **VO**, 1860-61
Fort Coville (Colville Valley): **SG-2**, **VO**, 1859-82
Fort Simcoe (Yakima County): **SG-1**, 1857-59; **SG-2**, 1857-59; **VO**, 1890-92
Fort Spokane (on Spokane River): **SG-2**, 1883-99; **VO**, 1883-1892; **Reg Sta**, 1883-87 (3d order)
Fort Steilacoom: **SG-1**, 1849-54, 1856-59; **SG-2**, 1849-67; **VO**, 1860-68
Fort Townsend (near Port Townsend): **SG-2** 1858-61, 1874-75; **VO**, 1860-61, 1874-92
Fort Vancouver (*see* Vancouver Barracks)
Fort Walla Walla (Walla Walla): **SG-1**, 1857-59; **SG-2**, 1856-67, 1874-92; **VO**, 1860-65 (with gaps), 1866-67; 1875-79, 1886-92
Grays Harbor (*see* Fort Chehalis)
Harney Depot: **VO**, 1860
Kennewick: **VO**, 1884-87
Lapush: **VO**, 1890-92
Madrone (Kitsap County): **VO**, 1891-92
Moxee Valley (Yakima County): **VO**, 1891-92
Neah Bay: **SI**, 1862-67; **VO**, 1874-75. 1978-81; **Reg Sta**, 1883-96 (3d order)
New Whatcom (Whatcom County): **VO**, 1891-92
North Yakima (Yakima County): **VO**, 1890

Olga (*also* "Doebay"): **VO**, 1890-92
Olympia: **Reg Sta**, 1877-92 (2d order), 1894-95 (3d order)
Pine Hill (Klickitat County): **VO**, 1892
Pleasant Grove (*see* Ellensburg)
Point Roberts: **Reg Sta**, 1881-82 (Sunset)
Pomeroy: **VO**, 1891-92; **Reg Sta**, 1882-83 (3d order)
Port Angeles: **SI**, 1869-72 (Tatoosh Island Lighthouse); **VO**, 1881, 1883; **Reg Sta**, 1883-85 (3d order), 1885-92 (2d order)
Port Crescent: **Reg Sta**, 1892-96 (3d order)
Port Townsend (*see also* Fort Townsend): **SI**, 1867-68
Pysht: **Reg Sta**, 1883-86, 1889-98 (3d order)
Ritzville: **VO**, 1892
Rosalia: **VO**, 1892
San Juan Island (includes Camp Pickett, Camp Steel, and Camp San Juan): **SG-1**, 1859; **SG-2**, 1859-62; **VO**, 1860-74
Seattle: **SI**, 1870-71; **VO**, 1877-78, 1887-88, 1890-92
Semiahmoo Bay (*see* Camp Semiahmoo)
Silver Creek: **VO**, 1892
Spokane Falls: **Reg Sta**, 1881-92 (2d order)
Tacoma: **VO**, 1881, 1884-92
Tatoosh Island: **Reg Sta**, 1883-89 (2d order), 1889-91 (3d order), 1891-92 (2d order)
Tatoosh Island Lighthouse (*see* Port Angeles)
Union City (Mason County): **VO**, 1892
Union Ridge (Clark County): **SI**, 1871-72
Vancouver (*see also* Vancouver Barracks): **SI**, 1858 (Wagon Road Expedition)
Vancouver Barracks (Vancouver; formerly Columbia Barracks and Fort Vancouver): **SG-1**, 1849-54, 1856-59; **SG-2**, 1849-66, 1881-92; **VO**, 1860-68, 1888-92
Vashon Island (King County): **VO**, 1887-92
Walla Walla (*see also* Fort Walla Walla): **SI**, 1869-70; **VO**, 1877-79; **Reg Sta**, 1885-92 (2d order)
Waterville: **VO**, 1890-92
Whatcom (Whatcom County): **VO**, 1875-76
Wilbur: **VO**, 1892
Yakima (*see* North Yakima)

**Daily Journals and Abstracts, 1877-1907.**

Almota: 1881-83
Canby, Fort (*see also* Fort Canby): 1891-99
Colfax: 1884-85
Crescent Bay: 1881-83
Dayton: 1879-85
East Clallam: 1892-1904
Fort Canby: 1883-90
Fort Spokane: 1883-87
Neah Bay: 1883-96; 1898-1902
North Head: 1902-7
Olympia: 1877-94
Pomeroy: 1879-83
Port Angeles: 1883-98
Port Crescent: 1892-1905
Pysht: 1883-99
Seattle: 1893-1907
Spangle: 1881-83
Spokane: 1881-1907
Tacoma: 1897-1907
Tatoosh Island: 1883-98, 1902-7
Twin: 1899-1904
Walla Walla: 1885-1907

**Records of Hourly Wind Movement, 1881-1904.**

Canby, Fort (*see also* Fort Canby): 1889-99
Dayton: 1884-85
Fort Canby: 1884-88
Neah Bay: 1898-1902
Olympia: 1881-94
Port Angeles: 1885-98

Port Crescent: 1898-1904
Seattle: 1893-1904
Spokane: 1883-1904
Tacoma: 1897-1900
Tatoosh Island: 1884-89, 1891-98, 1902-4
Walla Walla: 1886-1904

**Records of Hourly Wind Direction, 1892-1904.**

North Head: 1902-4
Olympia: 1892-94
Seattle: 1894-1904
Spokane: 1892-1901
Tacoma: 1897-1900
Walla Walla: 1903-4

**Monthly Reports of Weather Bureau Stations, 1905-7.**

North Head: 1905, 1906, 1907
Port Crescent: 1905
Seattle: 1905, 1906, 1907
Spokane: 1905, 1906, 1907
Tacoma: 1905, 1906, 1907
Tatoosh Island: 1905, 1906, 1907
Walla Walla: 1905, 1906, 1907

## Operational Records

**Station Inspection Reports, 1878-1912.** Reports are arranged alphabetically by name of station, with pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Almota: 1882 (2)
Canby, Fort: 1883-88 (17); 1893-94
Clallam Bay: 1896-11
Colfax: 1881 (23)
Crescent Bay: 1883 (25)
Dayton: 1882-83 (27)
Neah Bay: 1883-88 (64); 1893-1911
North Head: 1902-11
Olympia: 1878-88 (69)
Pomeroy: 1881 (75)
Port Angeles: 1883-88 (76); 1893-96
Port Crescent: 1896-1911
Pysht: 1883-88 (76); 1888-1911
Seattle: 1893-1911
Spokane: 1891-1911
Spokane Falls: 1881-88 (90)
Spokane, Fort: 1883-87 (91)
Tacoma: 1900-11
Tatoosh Island: 1883-88 (94); 1893-1911
Twin: 1911
Walla Walla: 1886-88 (99); 1891-1911

## Climatological Records

**Consolidated List of Climatological Records, 1849-1906** [SL 1]. Dates shown are years for which some materials exist. Series SG-1; SI; VO; and Reg Sta (monthly reports), through 1892, are reproduced as part of T907 (rolls 557-561).

Arland (Fremont County): **VO**, 1892
Atlantic City (*see also* Camp Stambaugh): **VO**, 1892
Big Horn Ranch (Big Horn County): **VO**, 1892
Bitter Creek: **VO**, 1891-92
Camp Brown (*see* Fort Washakie)
Camp Pilot Butte (Rock Springs): **SG-2**, 1888-94; **VO**, 1888-83
Camp Sheridan (*see* Fort Sheridan)
Camp Stambaugh (near Atlantic City): **SG-2**, 1870-72, 1874-78; **VO**, 1870, 1874-78
Camp Walbach (Cheyenne Pass): **SG-1**, 1858-59
Carbon (Carbon County): **VO**, 1889-90
Casper: **VO**, 1891-92
Cheyenne (*see also* Fort D.A. Russell): **Reg Sta**, 1871-92 (2d order)
Deer Creek (Indian Agency): **SI**, 1859
Evanston: **VO**, 1889, 1891-92
Fort Bridger: **SG-1**, 1858-59; **SG-2**, **VO**, 1858-90; **Reg Sta**, 1884-85 (3d order), 1885-88 (2d order)
Fort D.A. Russell (3 miles from Cheyenne): **SG-2**, **VO**, 1869-75; 1888-92
Fort Fetterman (near mouth of La Prele Creek; Albany County): **SG-2**, 1868-81; **VO**, 1868-82, 1890-92
Fort Fred Steele: **SG-2**, 1880-86; **VO**, 1869-80, 1882, 1884-86
Fort Halleck (at the foot of Medicine Bow Mountain; Carbon County): **SI**, 1864; **SG-2**, **VO**, 1862-66
Fort Laramie: **SG-1**, 1851-58; **SG-2**, 1855-59, 1872-90; **SI**, 1849, 1863-64; **VO**, 1860-65, 1868-77, 1886-89, 1891-92; **Reg Sta**, 1885-89 (3d order)
Fort McKinney (on Powder River; Johnson County): **SG-2**, 1886-94; **VO**, 1886-93; **Reg Sta**, 1887-91 (2d order)
Fort Phil Kearney (Big Horn Mountains; Johnson County): **VO**, 1867-68
Fort Sanders (3 miles from Laramie): **SG-2**, 1872-78; **VO**, 1866-78
Fort Sheridan (later Fort Yellowstone): **VO**, 1886-93
Fort Washakie (formerly Camp Brown): **SG-2**, 1872-1906; **VO**, 1872-78, 1880-93 (with gaps); **Reg Sta**, 1882-91 (2d order)
Fort Yellowstone (*see* Fort Sheridan)
Gilbert Trading Post (6 miles E. of summit of South Pass; South Pass Wagon Road Expedition): **SI**, 1859
Grandview (Crook County): **VO**, 1891
La Barge: **VO**, 1892
Lander: **VO**, 1889-92; **Reg Sta**, 1891-92 (2d order)
Laramie (*see also* Fort Sanders): **SI**, 1871; **VO**, 1890-92
Lusk: **VO**, 1889-92
Myersville (*see also* Sweetwater Bridge): **R**, 1888
Owen (Albany County): **VO**, 1890
Rock Springs (*see* Camp Pilot Butte)
Saratoga: **VO**, 1889-92
Sheridan: **VO**, 1891
Sundance: **VO**, 1889-92
Sweetwater Bridge (*see also* Myersville): **SI**, 1864
Wheatland: **VO**, 1888-92
Yellowstone National Park: **Pr**, 1886-87

**Daily Journals and Abstracts, 1870-1907.**

Cheyenne: 1870-1907
Fort Bridger: 1883-88
Fort Laramie: 1885-89
Fort McKinney (*see also* McKinney, Fort): 1888-90
Fort Washakie (*see also* Washakie, Fort): 1882-90
Lander: 1891-1907
McKinney, Fort: 1891
Sheridan: 1907
Washakie, Fort: 1891
Yellowstone National Park: 1903-7

**Records of Hourly Wind Movement, 1883-1904.**

Cheyenne: 1883-1904
Fort Bridger: 1886-88
Fort Washakie (*see also* Washakie, Fort): 1888
Lander: 1891-1904
Washakie, Fort: 1889-91
Yellowstone National Park: 1903-4

**Records of Hourly Wind Direction, 1891-1904.**

Cheyenne: 1896-1904
Lander: 1901-4
Yellowstone National Park: 1903-4

**Monthly Reports of Weather Bureau Stations, 1905-7.**

Cheyenne: 1905, 1906, 1907
Lander: 1905, 1906, 1907
Yellowstone Park: 1905, 1906, 1907

**"Miscellaneous Meteorological Material" listed in the *Annual Report* of the Smithsonian Institution for 1874.**

Local Meteorology--Wyoming

Atlantic City: George H. Lewis, Meteorological observations, 1871-72.
Fort Laramie: Colonel Collins, Hourly observations of thermometer, January 4-7, 1864.
Laramie City: Dr. H.L. Latham, Account of climate.

## Operational Records

**Station Inspection Reports, 1877-1911.** Reports are arranged alphabetically by name of station, with

pre-1890 reports bound in volumes numbered 1-103. Pertinent volume numbers are shown in parentheses. Reports for the period 1890-1912 are not bound.

Bridger, Fort: 1886-87 (8)
Cheyenne: 1872-88 (19); 1892-1911
Lander: 1901-8
Laramie, Fort: 1887-88 (48)
Sheridan: 1908
Washakie, Fort: 1888 (101)
Yellowstone Park: 1905-8

# Record Group 30

## RECORDS OF THE BUREAU OF PUBLIC ROADS

*P.T. Tannehill, of Henderson County, Texas, says: "Our roads are not worked, the wagoner making his own way. Soil remarkably favorable for roads. No macadamizing material in the State, none needed. Road laws in this magnificent State, like other laws, seldom executed. No turnpikes; don't need them. Roads last until they become too miry, when wagoners cut a new one. Texas can boast of the best roads, with the least work, of any State in or out of the Union. Our citizens generally regard work as unconstitutional."*

*Survey report, "County Roads and Road Laws,"* Report of the Commissioner of Agriculture, *1868, p. 348.*

### INTRODUCTION

**30.1** The Bureau of Public Roads had its origin in the Office of Road Inquiry, created by the Secretary of Agriculture on October 3, 1893, under authority of an act of March 3, 1893. Within the Department of Agriculture it was known successively as the Office of Public Road Inquiries, 1899-1905, the Office of Public Roads, 1905-15, the Office of Public Roads and Rural Engineering, 1915-18, and the Bureau of Public Roads, 1918-39. After 1939 the Bureau underwent changes in both name and departmental jurisdiction but was called the Bureau of Roads when, as a component of the Federal Highway Administration, Department of Transportation, it was abolished in August 1970.

**30.2** The Agricultural Appropriation Act for fiscal year 1894 (27 Stat. 737) appropriated $10,000 "to enable the Secretary to make inquiries in regard to the systems of road management throughout the United States, to make investigations in regard to the best methods of road-making, to prepare publications on this subject suitable for distribution, and to enable him to assist the agricultural colleges and experiment stations in disseminating information on this subject." Passage of the act resulted mainly from demands of good-roads-movement groups in the 1880's and 1890's for Federal aid in improving existing roads and in providing more efficient construction of new ones. Outstanding among these groups, because they transformed local agitation for better roads into a national movement, were the National League for Good Roads and the League of the American Wheelmen. Gen. Roy Stone, the New York civil engineer who had initiated the Good Roads Convention in Chicago in 1892 and who became the general vice president of the National League for Good Roads, was selected by the Secretary of Agriculture as the Special Agent and Engineer to head the Office of Road Inquiry.

**30.3** Some of the functions of the Bureau of Public Roads may be traced to the first effort of the Federal Government to aid highway construction--the appointment on March 9, 1806, of a commission to supervise the construction of the "Old Cumberland Road." Thereafter, Federal involvement in road construction was sporadic at best, with responsibility for road construction and maintenance generally allocated to the States. Another antecedent, especially of the Bureau's investigative role, can be traced to two Commissioners of Agriculture, Isaac Newton and Horace Capron, whose annual reports for 1866 and 1868, respectively, contain studies of rural road conditions and suggested improvements in road construction and management.

**30.4** From 1893 until 1912 the functions of the Office of Road Inquiry and its successors were those of investigation and education only. At first the Office disseminated information almost wholly through publications, lectures, and consultation. In 1895 it began to conduct tests on roadmaking materials and in 1896 began to encourage the construction of "object-lesson roads." These roads were financed locally and built under the supervision of Office engineers to demonstrate the value and methods of building good roads. Building such roads was to remain the Office's most important function until 1912, but it also built other experimental roads in order to increase the scientific knowledge of road-building; the first one, made of steel, was built in 1898.

**30.5** In 1900 a laboratory for testing roadmaking materials was set up in cooperation with the Bureau

of Chemistry, and five years later, by authority of the Agricultural Appropriation Act for fiscal year 1906, the Office of Public Road Inquiries and the Division of Tests of the Bureau of Chemistry were consolidated under the name of the Office of Public Roads. The functions of the Office remained unchanged, but the work was divided among three general divisions--Highways, Information, and Laboratory Tests and Investigations. A Subdivision of Special Advice and Inspection handled the numerous requests for advice from State and local roads authorities, including by 1907 the preparation of plans and estimates for model county-road systems. A system of apprenticeship training in road engineering for civil engineering graduates and for materials laboratory technicians was also developed. The Office entered a new field of research in 1909, when it began economic and statistical investigations to determine the status of road improvement and, later, the economic effect of improved roads on communities. A Division of Bridges and Culvert Engineering was added in 1910.

**30.6** In 1912, with the passage of the appropriation act for the Post Office Department for fiscal year 1913, the Federal Government reentered the field of public roadbuilding, an activity which, with several exceptions, it had largely abandoned in the late 1850's. The act (37 Stat. 551) authorized $500,000 "to be expended by the Secretary of Agriculture in cooperation with the Postmaster General in improving the condition of roads to be selected by them over which rural delivery is or may hereafter be established ... Provided, That the State or the local subdivision thereof in which such improvement is made under this provision shall furnish double the amount of money for the improvement of the road or roads so selected." By the time it was abolished in 1970, the Bureau of Roads was responsible for administering the Federal-aid highway program, developing and administering a highway safety program, constructing defense highways, constructing roads in national parks and forests, conducting research in transportation and highway design, providing assistance to foreign governments, and administering the highway beautification program. These functions were assumed by the Federal Highway Administration.

**30.7** Record copies of publications of the Bureau of Public Roads and its predecessors are part of Record Group 287, Publications of the U.S. Government. Related records can be found in other record groups, particularly Record Group 16, Records of the Office of the Secretary of Agriculture, which includes correspondence concerning the general supervision of the Bureau's activities. Copies of letters prepared by the Bureau for the signature of the Secretary, 1906-29, are reproduced as part of National Archives Microfilm Publication M440, *Letters Sent by the Secretary of Agriculture, 1893-1929* (rolls 428-439). Records relating primarily to civilian wagon roads constructed in the Western United States under the direction of the Secretary of the Interior and secondarily to roads constructed by State authorities under provisions of legislation granting public land to certain States to aid in the construction of roads are found in Record Group 48, Records of the Secretary of the Interior. Most of these records, 1857-87, have been reproduced as National Archives Microfilm Publication M95 (16 rolls). During the same time period, the War Department was involved in constructing military wagon roads, but documentation relating to that activity is dispersed among the records of several military bureaus. Memorials and petitions received by Congress relating to road construction are among committee records in Record Group 46, Records of the U.S. Senate, and Record Group 233, Records of the U.S. House of Representatives.

**30.8** The textual and photographic records discussed below were created or accumulated by the National League for Good Roads, the Office of Road Inquiry, the Office of Public Roads Inquiries, and the Office of Public Roads through 1912, with a few records of a later date. These and later records, including cartographic materials, are described in detail in *Preliminary Inventory of the Records of the Bureau of Public Roads* (PI 134), compiled by Truman R. Strobridge. Some records, primarily those of field offices dating from 1916 or later, have been added to the record group since the inventory was published in 1962; such records are described in a supplement (1986) in the National Archives microfiche edition of preliminary inventories. Also available for use with the photographic records is a "Selected List of Titles in the Bureau of Public Roads Highway Transport File (Prints)" (NC-137), compiled by Susan Kay Parker and Sadie S. Mittman.

**30.9 Editorial Note:** Many records included in Record Group 30 originated after 1912, and they are not described in this chapter unless otherwise noted. Among them are records of field offices, held by the regional archives, and cartographic records, which begin in 1920. Most photographic records are maintained apart from the textual records, and they are identified by alphabetic collection designators rather

than by series titles; the designators are shown in parentheses.

## General Records

**30.10** In October 1892, one year before he became the first head of the Office of Road Inquiry, Gen. Roy Stone had organized the National League for Good Roads in an attempt to consolidate, within a national association, the local and State activities of groups promoting "good roads." The aims of the League were to arouse public interest in road improvement, to determine the best techniques of road construction and maintenance, to secure highway legislation on the State and national levels, and to foster publications that would encourage these activities. Through its efforts the League played an influential role in the establishment of the Office of Road Inquiry. When Stone came to the Office of Road Inquiry, he brought some records of the League with him, and they became part of the files of the new office.

**30.11** Press copies of **letters sent, 1892-93** (2 vols., 4 in.), by Stone as vice president and acting secretary of the League are arranged chronologically, and each volume is indexed by name of correspondent. Many of the letters are blurred or faded, but they reveal the attempts of the organization to establish State, county, and local chapters; to solicit funds; to get favorable legislation passed; and to educate and organize the public concerning the need for good roads. Some of the letters received by Stone as an officer of the League are filed in the general correspondence series described below (30.13).

**30.12** Press copies of **letters sent, 1893-1904** (39 vols., 5 ft.), deal with all activities of the Office of Road Inquiry and its successor, the Office of Public Road Inquiries. The letters are arranged chronologically, and each volume is indexed by name of correspondent. Record copies of letters sent after 1904 are incorporated into the general correspondence.

**30.13** The consolidated file of **general correspondence, 1893-1916** (50 ft.), consists of letters received by the Office of Road Inquiry, the Office of Public Road Inquiries, and the Office of Public Roads, and beginning about 1904, copies of letters sent. Also included are related records such as reports, memorandums, and published material concerning the establishment of the Office, its overall administration, and its varied functions and activities, especially the building of object-lesson roads. The correspondence with members of Federal and State legislative bodies, State highway officials, professional societies, associations for the promotion of good roads, and the general public reveals the efforts of the Office to gather and disseminate information concerning roads, model road systems, and roadbuilding and to cooperate with legislators, private citizens, and Government agencies in promoting good roads and obtaining the necessary legislation to build them. Included are some records dated as early as July 1890, which were accumulated by General Stone prior to his appointment as head of the Office of Road Inquiry. The general correspondence is arranged according to a numeric-subject classification scheme, which is reproduced in part in the table accompanying this chapter. Access to the correspondence is further facilitated by a **name index, 1892-1912** (15 ft.), divided into two subseries covering approximately the years 1892-1908 and 1908-12 and thereunder arranged alphabetically by name of correspondent. Compiled on 3- by 5-inch cards, the entries show the names of correspondents, dates of letters, and file numbers under which correspondence is filed.

## Records Concerning Activities of the Office of Public Road Inquiries

**30.14** Press copies of **letters sent by E.G. Harrison, special agent and road expert, 1900** (1 vol., 1 in.), deal with techniques of roadbuilding, road drainage, road legislation, experiments, lectures, conventions, job applications, and other matters relating to the work of the Office. This volume appears to be the only extant volume of letters sent by Edmund G. Harrison, who directed the construction of object-lesson roads and demonstrated the importance of road improvement in nearly every State east of the Rocky Mountains. These letters are not duplicated in the letters sent described above (30.12), although many letters in the general correspondence concern Harrison's work. The letters, which are chiefly replies to inquiries from Congressmen, State legislators, engineers, professors, members of good-roads associations, and private individuals, are arranged chronologically and indexed alphabetically by name of correspondent.

**30.15** Press copies of **letters sent by the Division of Laboratory Tests and Investigations, 1901-5** (6 vols., 9 in.), to Federal, State, and local officials, engineers, geologists, chemists, professional socie-

ties, and private persons and companies, both domestic and foreign, concern the functions and activities of the Division, especially the testing of road materials. Included are copies of printed form letters giving the results of such tests. Also included are letters concerning the function (assumed in 1904, when the Division was called the Division of Tests) of testing construction materials used in agriculture, such as reinforced concrete for fence posts and steel wire for fencing purposes. Related letters received by the Division are filed in the general correspondence series (30.13). The letters are arranged chronologically, and each volume is indexed by name of correspondent.

**30.16** Press copies of printed **form letters sent by the Division of Laboratory Tests and Investigations, 1901-5** (4 vols., 6 in.), report the results of tests made by the Division on road materials submitted for analysis of chemical and physical qualities. These materials were subjected to tests for abrasion, cementation, toughness, and hardness; their density, absorptiveness, and proper nomenclature were also determined. The letters are arranged chronologically; each volume is indexed by name of correspondent.

### Records Concerning Employees and Correspondents of the Office of Public Roads

**30.17** Allerton S. Cushman, Assistant Director of the Office of Public Roads, collaborated with the Bureau of Plant Industry in experiments on the use of ground feldspar rocks as potash fertilizer. These experiments are the subject of most of the **letters sent by A.S. Cushman, 1906-8** (1 vol., 1 in.), to employees of the Bureau of Plant Industry, individuals performing experiments in the field, agricultural experiment stations, and private persons and companies requesting information on the subject of cheap fertilizer as plant food. These press copies of Cushman's letters are arranged by date and indexed by name of addressee. Results of the experiments were published in the *Journal of the American Chemical Society*.

**30.18** Cushman's activities are also documented in press copies of **letters sent concerning the American Society for Testing Materials, 1904-5, 1908-12** (1 vol., 1 in.). These letters were sent chiefly by Cushman and his fellow staff member, Logan W. Page, as members of the Society and as chairpersons of certain road material committees of the Society. Related letters received by the Bureau and its predecessors are filed in the main correspondence series (30.13). The letters are arranged chronologically and indexed by name of correspondent.

**30.19** Copies of printed **certificates of appointment, 1905-11** (3 vols., 6 in.), document the Secretary of Agriculture's appointment of the Director, engineers, road experts, and other employees of the Office of Public Roads. The certificates show the appointee's name, State of residence, date of appointment, position, salary, appropriation from which paid, and occasionally conditions of employment. Also included are some orders of promotion. The entries in each volume are arranged chronologically and indexed by name of appointee.

**30.20** In order to obtain statistics and to remain an up-to-date repository of information on all phases of road work, the Office organized a large corps of "public roads correspondents," composed of public-minded private citizens who represented every county in the United States. These correspondents volunteered their services in helping the Office investigate and collect information on roads. Their only compensation was in the form of such Government documents and maps as could be made available to them. Voluntary correspondents had been similarly used by the Department of Agriculture in obtaining information on crops and weather conditions. Correspondents are identified by copies of **certificates of appointment, 1905-9** (9 vols., 1 ft.), which also show the date of appointment and the State and county of residence. The certificates are arranged chronologically; each volume is indexed by name of correspondent.

**30.21** When the Office began an extensive investigation of systems of road management, a revision of the list of approximately 2,800 public roads correspondents who had participated in earlier investigations was necessary. The **letters sent concerning public roads correspondents, 1908-10** (1 vol., 1 in.), are of three types: (1) letters to State highway officials asking for names of suitable individuals in the different counties, (2) letters to private citizens asking if they would serve as public roads correspondents without pay, and (3) letters to public roads correspondents relating to their duties. Arranged chronologically, the letters are indexed by name of correspondent.

### Reports of Highway Studies

**30.22 Reports concerning the economic effects of road improvement, 1910-18** (10 in.), are based

on economic studies begun in 1910 to ascertain the benefits and burdens brought to a community by a system of improved roads. The studies, designed to cover approximately a 5-year period, were made at 1-year intervals and, as nearly as possible, provided the same kind of information each year. The reports of these studies reveal the character and resources of the counties selected; the type, extent, and cost of road improvements; the effect of road improvements on assessed valuation of property; the financial burden as indicated by tax rates; and the general prosperity of the counties as shown by local production, size and distribution of population, kind of school buildings, and other related information. Included with the reports are handwritten work notes and manuscripts, photographs, newspaper clippings, maps, charts, and some related correspondence--material that was probably removed from other files. Also included are unpublished reports of studies on the economic effects of post roads. The reports are arranged alphabetically by name of State and thereunder by name of county. Most of the records relate to Eastern States, but files are also found for Iowa, Kansas, and Wyoming.

**30.23** Some relevant items are found in series compiled well after 1912. Among the **reports concerning service life of roadway surfaces, 1935-36** (5 in.), is a 1935 study titled "Report on the Street System of the City of Des Moines, Iowa," that provides data and statistics dating from 1901. Another series, consisting chiefly of carbon copies of **reports on motor vehicle use in various States, 1912-60** (3 in.), includes a study called "The Use of the Motor Vehicle in California, 1912 to 1960," that features numerous statistical tables and graphs containing pertinent data. Similar studies for later periods are available for Texas (1913-60), Idaho and Nevada (1919-60), and Utah (1920-60). Also available is a study called **"Motor Vehicle Production and Use in the United States, 1895-1960"** (1/2 in.).

PHOTOGRAPHIC RECORDS

**30.24** Filed apart from the textual records are photographs (N), some of graphic arts, illustrating the evolution of transportation from ancient times to 1963. Also included are views of cities and communities throughout the United States; trails, roads, highways, highway construction, roadside facilities, and traffic in the United States. Some photographs are arranged alphabetically by subject and, in certain cases, thereunder by State. An alphabetical subject list (NC-137) is available. An album of photographic prints shows scenes of San Francisco, CA, after the earthquake in 1906 (HH). Also included are color transparencies of a diorama exhibit illustrating the history and importance of trails, roads, and highways in the expansion and development of North America from 1539 to 1939 (HOH), and lantern slides, showing road construction; equipment and techniques used in repairing roads; scenic views of the United States; railroads; convict labor camps; and immigrants, 1900-42 (R).

## TABLE - 30.13
## Select List of Subjects and Correspondents in the General Correspondence, 1893-1912

Asterisks identify object-lesson road projects.

| Subject/Correspondents | File Number |
|---|---|
| Alaska-Yukon Pacific Exposition | 411 |
| Alden Bridge, LA* | 287 |
| Alexandria, LA* | 50 |
| American Association for Highway Improvement | 528 |
| American Road Makers' Convention | 20 |
| Annual reports | 23 |
| Appropriations | 2 |
| Arizona roads | 19 |
| Arkansas City, KS* | 130 |
| Arkansas roads | 107 |
| Arlington, TX* | 472 |
| Assistance other than object-lesson roads | 88 |
| Auburn, NE* | 189 |
| Batesville, AR* | 46 |
| Baton Rouge, LA* | 149 |
| Beaumont, TX* | 58 |
| Bellingham, WA* | 54 |
| Benefits of road improvement | 17 |
| Billings, MT* | 304 |
| Bismarck, ND* | 340 |
| Boise, ID* | 500 |
| Brenham, TX* | 230 |
| Brick roads | 29 |
| Bridges | 31 |
| Brookings, SD* | 294 |
| Bucklin, KS* | 431 |
| Burnt-clay roads | 11 |
| Caldwell, ID* | 468 |
| California roads | 172 |
| Carlsbad, NM* | 180 |
| Cement and concrete | 27 |

| Subject/Correspondents | File Number |
|---|---|
| Cement clinkers | 470 |
| Charleston, MO* | 398 |
| Circular letters | 84 |
| Clay tests | 232 |
| Clippings | 9 |
| Colorado roads | 108 |
| Colorado, TX* | 391 |
| Columbia, MO* | 221 |
| Construction | 10 |
| Consular reports | 416 |
| Convict labor | 97 |
| Cordell, OK* | 397 |
| Cost of roads | 48 |
| Cost of transportation | 65 |
| Crockett, TX* | 552 |
| De Graca, Capt. J. Cordeiro | 315 |
| Digest of road laws | 265 |
| Dodge City, KS* | 423 |
| Drainage | 14 |
| Drill Manufacturing Co. | 548 |
| Dust preventive symposium | 358 |
| Dustless roads experiments | 335 |
| Duwamish, WA* | 249 |
| Earth roads | 139 |
| Economic investigation | 526 |
| Edina, MO* | 78 |
| El Camino Real, CA | 93 |
| El Paso, TX* | 380 |
| Englewood, KS* | 405 |
| Erick, OK* | 480 |
| Eugene, OR* | 35 |
| Evening Shade, AR* | 459 |

| Subject/Correspondents | File Number |
|---|---|
| Fairbury, NE* | 364 |
| Forest reservation | 279 |
| Fort Collins, CO* | 341 |
| Frisco Good Roads Train | 56 |
| Garden City, KS* | 414 |
| Good Roads Trains | 530 |
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| Gravel roads | 72 |
| Great Northern Good Roads Train | 68 |
| Gross, H.H. | 365 |
| Hallville, TX* | 386 |
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| Idaho, Oregon, and Washington roads | 231 |
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| Independence, KS* | 413 |
| Indian Territory roads | 201 |
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| Macadam roads | 316 |
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| Missouri, Kansas, and Texas Good Roads Train | 145 |
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| Sherman, NE* | 587 |
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| South Dakota roads | 253 |
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| Texas roads | 125 |
| Toll roads | 71 |
| Tractor trains | 537 |
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# Record Group 33

## RECORDS OF THE EXTENSION SERVICE

*The spread of the cotton-boll weevil in Texas led the Department of Agriculture, through the Bureau of Plant Industry, to attempt not only to diminish the injury to the cotton crop by this insect but also to offset its attack by improving the general practice of agriculture in the South. Through this movement was developed,...beginning in 1903, the system of extension work through supervised demonstrations by farmers on their own farms, county agricultural and home demonstration agents, and boys' and girls' clubs. At first this work was independent of the colleges, but gradually they came into more or less definite cooperation with it. The States and counties in the South also made appropriations for its support. By 1914 more than 1,000 men and women agents were employed in 15 Southern States.*

*In 1909 the office of farm management of the Bureau of Plant Industry began farm demonstration work in Ohio, and in 1911 the first county agent was appointed in New York. This work spread in the Northern and Western States in cooperation with the agricultural colleges, counties, and local organizations. In 1914 more than 200 agents were employed in this work.*

*T. Weed Harvey*, Extension Service Handbook on Agriculture and Home Economics (*1926*), *p. 44.*

### INTRODUCTION

**33.1** The Extension Service of the Department of Agriculture was organized July 1, 1923, to bring together Department extension activities handled by the States Relations Service, the Office of Exhibits of the Assistant Secretary's Office, and the Office of Motion Pictures of the Division of Publications. The States Relations Service had been established in 1915 as a consolidation of the Office of Experiment Stations and the farmers cooperative demonstration work of the Bureau of Plant Industry. The Secretary of Agriculture renamed the Extension Service the Federal Extension Service in 1953, but in 1970 its name reverted to Extension Service.

**33.2** "Extension work" in this context refers to the extension of knowledge and techniques of agriculture and home economics to farmers and their families on a nationwide scale. In the United States it had its origin in the early agricultural societies, one of the first of which was the Philadelphia Society, founded in 1785. The activities of these societies were limited mainly to the dissemination of agricultural information through publications, newspaper articles, and lectures. By 1825 local farmers' clubs were being formed, and they increased in number at a rapid rate. States did not begin to participate in these activities until about 1852; Federal Government participation did not begin until about 1889.

**33.3** Farmers' institutes came into being in the early 1850's. Sponsored increasingly by State agencies as time went on, they became the chief means of carrying on extension work. The Office of Experiment Stations, created in the Department of Agriculture in 1888 to administer the Hatch (Agricultural Experiment Station) Act of 1887, quickly realized institutes could disseminate the results of station experiments. In 1903 the Office of Experiment Stations added a farmers' institute specialist to its staff, and the Office became a clearinghouse for information on the institutes. The Office continued its interest in the farmers' institutes until about 1910, when newer types of extension work began to displace them.

**33.4** Other bureaus of the Department of Agriculture carried on certain other extension activities. For example, the Dairy Division of the Bureau of Animal Industry cooperated for many years with the State colleges of agriculture in improving the quality of dairy products, increasing sanitation in milk production, and finding ways of exporting more cheese and butter.

**33.5** From 1904 until the end of fiscal year 1914, most of the Department's extension work was centered in the Bureau of Plant Industry. When the Bureau received half of a 1904 emergency appropriation of $250,000 to combat the boll weevil, it used $40,000 of that amount to fund an experimental program directed by Dr. Seaman A. Knapp to determine the possibilities of demonstrating to farmers on their own farms practical methods of growing cotton despite the presence of the boll weevil. To accomplish this goal, the Bureau set up an Office of Cooperative Demon-

stration Work to demonstrate good farm practices in the Southern States.

**33.6** The Office of Farm Management was organized in the Bureau of Plant Industry to investigate improved methods of farm management and farm practice and to encourage their adoption. It placed agents in districts comprising two or more States to study farm management problems and various types of farming. These agents worked in cooperation with agricultural colleges, experiment stations, and farmers' organizations. Field meetings, bulletins, newspaper publicity, and demonstrations were used to promote more profitable types of farming and improved farm practices. Within a few years all of the States were carrying on this work.

**33.7** County agent work grew indirectly out of the pioneer work of Dr. Knapp in the South. By 1904, 24 men had been appointed in Texas, Arkansas, and Louisiana, each one assigned to work in from 10 to 20 counties, most of which were accessible to railroads. The work spread rapidly to other States, and late in 1906 the first county agent was appointed to work exclusively in one county--Smith County, TX. Also in 1906, two blacks were employed as agents with money furnished by the General Education Board, a private organization established by John D. Rockefeller to promote education throughout the United States; the number of black agents increased rapidly thereafter. Five years later, over 580 county agents were employed in the South. The first county agent to serve in the West was appointed for Uintah County, UT, on March 1, 1911. During this early period the Office of Farm Management furnished the chief Federal stimulus to county agent work. The Office was aided by State governments, railroads, and the General Education Board.

**33.8** Boys' and girls' club work appears to have been begun in 1900, and the first boys' club in the South was organized in 1907. In 1909 Dr. Knapp undertook to systematize the boys' and girls' club work and made the State, district, and county agents responsible for supervision and expansion of the clubs. In the Northern and Western States, boys' and girls' club work developed rapidly after 1912.

**33.9** The number and variety of extension specialists connected with agricultural colleges grew steadily in all the States, and the success of the extension movement led to agitation for a nationwide extension system. In 1908 the Association of Land-Grant Colleges recommended a Federal appropriation to finance such a unified system, but prior to passage of the Smith-Lever Act in 1914 the only Federal funds available were provided piecemeal by special provisions of annual appropriation acts. The Smith-Lever Act, perhaps the most important single piece of legislation affecting agricultural extension work, provided for cooperation between the Department of Agriculture and the land-grant colleges in States whose legislatures accepted the provisions of the act. Colleges would receive Federal funds if they submitted annual plans for agricultural extension work to the Secretary of Agriculture for approval and maintained certain standards in carrying out the work, and if the respective States matched the Federal funds.

**33.10** In order to meet the demands placed upon the Department by the Smith-Lever Act as well as by its increased research and regulatory work, the Secretary of Agriculture reorganized the Department in 1915. All the extension activities of the Office of Experiment Stations and the Bureau of Plant Industry were consolidated into the States Relations Service.

**33.11** Nearly all of the records discussed in this chapter are textual records. No cartographic records exist for the pre-1913 period, and only a few relevant photographic records are available. Among the records described are correspondence and reports relating to farmers' cooperative demonstration work in the South, correspondence of the Extension Service and its predecessors, annual narrative and statistical reports of extension workers in the field, records concerning boys' and girls' activities, and records relating to departmental participation in fairs and expositions. These and other related records are described in detail in *Preliminary Inventory of the Records of the Extension Service* (PI 83), compiled by Virgil E. Baugh and published in 1955, and a supplement, "Preliminary Inventory of the Records of the Federal Extension Service" (NC-117), compiled by James E. Primas and Virgil E. Baugh and issued in June 1965.

**33.12** Records relating to agricultural extension activities may be found in other record groups in the National Archives. Pertinent materials in Record Group 16, Records of the Office of the Secretary of Agriculture, are found among the records of the Agricultural Section of the Patent Office, 1839-60, and the correspondence of the Commissioners and Secretaries of Agriculture, 1879-1946. In Record Group 54, Records of the Bureau of Plant Industry, Soils, and Agricultural Engineering, the general correspondence of the Office of the Chief, 1908-39, is relevant as are several correspondence files of the Office of

Experiment Stations in Record Group 164, Records of the Cooperative State Research Service. Pertinent publications of the Bureau of Plant Industry and the Office of Experiment Stations are in Record Group 287, Publications of the U.S. Government. Additional records relating to expositions are in Record Group 43, Records of International Conferences, Commissions, and Expositions, and the relevant records are described in *The Trans-Mississippi West, 1804-1912: Part I, A Guide to Records of the Department of State for the Territorial Period*, and *Preliminary Inventory of the Records of United States Participation in International Conferences, Commissions, and Expositions* (PI 76) and supplement (NC-95).

**33.13 Editorial Note:** Many records included in Record Group 33 originated after 1912, and they are not described here. Unless otherwise noted, series consisting of records originating prior to 1913 but extending beyond that date are described in their entirety; no attempt has been made to determine what part of such series relates to the pre-1913 period. The photographic records, which are maintained apart from the textual records, are identified by alphabetic collection designators instead of by series titles; the designators are shown in parentheses.

## RECORDS FROM THE BUREAU OF PLANT INDUSTRY

### Records Concerning Farmers' Cooperative Demonstration Work in the South

**33.14** The broad extension enterprises inaugurated in Texas in 1904 came to be known as farmers' cooperative demonstration work. As the work progressed under the direction of Dr. Seaman A. Knapp, its primary purpose was to show Southern farmers, through demonstrations of the advantages and techniques of crop diversification, that they could successfully grow crops other than cotton.

#### Correspondence

**33.15** Seaman Knapp's incoming letters constitute the bulk of the records. **Letters received by Dr. Knapp, chiefly from cooperating farmers, Mar. 1905-Dec. 1906** (2 ft.), also include a few letters from cooperating agencies, agricultural colleges, and business firms. Some correspondents sought advice on raising certain farm crops or asked for seed; others offered their services as demonstrators; still others wrote commending the demonstration work. The letters are arranged alphabetically by name of correspondent. Most of the **letters received by Dr. Knapp from county demonstration agents, June 1905-Jan. 1912** (4 ft.), are for the period 1905-7. Arranged alphabetically by name of agent and thereunder chronologically, they relate to work being done on the demonstration farms and include some travel reports, reimbursement vouchers, and other enclosures of an administrative nature.

#### Reports and Other Records

**33.16** The **agents' reports on demonstration farms and crops, Nov.-Dec. 1906** (1 in.), are end-of-the-year form reports that contain detailed information on the crops raised and harvested, costs, yield, profit per acre, and other pertinent data. Also given are the name and address of the demonstrator and the name of the special agent. Among the records, which are arranged by State, are reports for Arkansas, Louisiana, and Texas. **Periodic reports of agents, demonstrators, and cooperators; letters commending demonstration work; and minutes of agents' meetings, 1907-13** (8 in.), include materials for Arkansas, Louisiana, Oklahoma, and Texas. Included in some of the reports are photographs, newspaper clippings, and other enclosures.

## RECORDS OF THE EXTENSION SERVICE

### General Records

#### Correspondence

**33.17** Arranged by years, thereunder alphabetically by States, Territories, and the District of Columbia, the **general correspondence of the Extension Service and its predecessors, June 1907-June 1943** (406 ft.), consists of records from three distinct administrative entities, namely the Special Agent in Charge of Cooperative Demonstration Work, Bureau of Plant Industry, 1907-15 (ca. 3 ft.); the States Relations Service, 1915-23; and the Extension Service, 1924-43. The correspondence concerns all phases of extension work and includes letters received and copies of letters sent, telegrams, memorandums, annual and other administrative reports, and informational materials. Access to the correspondence is

facilitated by a name or "author" index and a subject index.

**33.18** The **"author" index to general correspondence, 1907-43** (61 ft.) is arranged in two subseries, covering approximately 1907-33 and 1934-43 and thereunder alphabetically by names of persons, firms, and organizations corresponding with the Extension Service or its predecessors. Each 3- by 5-inch card contains the name, State, or other designation under which the correspondence is filed and the date. The **subject index, 1907-43** (255 ft.), is arranged in three overlapping subseries, 1907-33, 1933-39, and 1939-43, and thereunder alphabetically by subject. The 3- by 5-inch cards or slips index each letter in the general correspondence by general and special subject headings. Each card or slip shows the file location of the particular letter by State or Territory and date, and gives the name of the correspondent and a brief of the letter's contents. A list of the main subject headings used in the index is provided in Preliminary Inventory 83. Headings include animal products, anthropology, art, conservation, corn borer, dairy products, drought, entomology, fairs, fire, flood, forestry, history, immigration, land, music, poultry products, rural housing, soil, and trains.

**33.19** The **general correspondence, Sept. 1906-June 1926** (40 ft.), of the Division of Agricultural Instruction documents the contribution of the Department of Agriculture to the progress made in vocational education in agriculture during the 20-year period covered by the records. The correspondence relates to liaison with schools of agriculture, to instruction in various fields, to relations with other interested bureaus of the Department and other Federal agencies, to vocational guidance and other aspects of vocational education, and to administrative matters. The records consist largely of letters received and copies of letters sent, arranged alphabetically by name of correspondent and thereunder chronologically.

### Reports and Related Records

**33.20** Annual narrative and statistical reports constitute the chief sources of documentation of the activities of the Extension Service and give an intimate account of the details of farm operation and rural life in every State of the Union, in the Territories of Alaska and Hawaii, in Puerto Rico, and to a minor extent, in the District of Columbia. Reports were submitted to the central office in Washington by State officials (directors, assistant directors, and State leaders), subject-matter specialists (experts in various fields of extension work who were employed in the directors' offices), and county agricultural, home demonstration, and club agents. Most of these reports were reproduced on 16 mm negative microfilm and the originals destroyed. The **microfilm copies of annual narrative and statistical reports, 1909-44** (3,577 reels, 316 ft.) are arranged alphabetically by States, Territories, possessions, and the District of Columbia, thereunder by year, and usually thereunder in the following order: subject-matter specialists, director, assistant director, State leaders, and county agents. Separate microfilm publications are available for each State or other geographical unit. Only a few State reports submitted before 1913 have survived; they are for Arkansas (T8448) Iowa (T860), Louisiana (T863), North Dakota (T879), Oklahoma (T881), and Texas (T890). Reports for most of the States west of the Mississippi River begin in either 1913 or 1914. Additional reports for Arkansas, 1911-66, are among the holdings of the National Archives--Southwest Region in Ft. Worth, TX.

**33.21** **Reports and other records concerning boys' and girls' club activities, 1911-22** (2 ft.), are in two segments. The first segment, arranged alphabetically by subject, consists of summary records of club work as a whole. These include achievement reports, reports on special awards and trips, records concerning special phases and problems, plans and methods of organizing clubs, lists of members, and some correspondence. The second segment, dealing with club work by States, consists of narrative reports ("club stories") and statistical reports, prepared and sent in to the Washington office by members of poultry, pig, cotton, canning, cooking, corn, sewing, and radio clubs; account books showing expenditures of time and money (from some States only); correspondence; and exhibit material. These reports are arranged alphabetically by State, with records for Arizona, California, Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.

### Records Relating to Fairs and Expositions

**33.22** National agricultural exhibit work in the United States began with an exhibit of American agricultural machinery at the first great world's fair held at the Crystal Palace in London in 1851. By 1912

the need for centralization and standardization of exhibits work was apparent, and on June 3, 1912, the Secretary of Agriculture made the Chief Clerk of the Department responsible for monitoring all requests for exhibits. A Special Agent on Exhibits was appointed to handle the work. In 1920 an Office of Exhibits was established; when that Office later became the Agricultural Exhibits Section of the Extension Information Division, the Extension Service acquired the records described below.

Records Concerning the
World's Columbian Exposition

**33.23** The 400th anniversary of the discovery of America by Christopher Columbus was celebrated by an exposition held in Chicago, IL, from May 1 through October 30, 1893. Chicago had been designated as the host city by an act of Congress of April 25, 1890, which also authorized the President to appoint the World's Columbian Commission, consisting of two members from each State, Territory, and the District of Columbia, together with eight commissioners at large. Government exhibits, displaying articles and materials to illustrate the functions of different Departments, were housed in a building erected by the Secretary of the Treasury at a cost of $400,000. Agencies concerned in the building and conduct of the exposition included a Board of Government Management and Control, which supervised the Government exhibits and was chaired by the Assistant Secretary of Agriculture. The records consist of **letters received by the Chair, Board of Management, 1891-99** (10 in.), arranged chronologically, concerning the procurement, shipment, display, and judging of the exhibits, and the framing of rules and regulations, arrangements for meetings, and other administrative matters. Included are a few copies of letters sent and enclosures, such as lists of exhibits, copies of congressional bills, and printed matter.

Records Concerning the Trans-Mississippi and
International Exposition

**33.24** This exposition was held in Omaha, NE, from June 1 through October 31, 1898. A Board of Management, United States Government Exhibit, was chaired by Assistant Secretary of Agriculture J.H. Brigham. Other Board members came from executive departments, the Smithsonian Institution and National Museum, and the U.S. Fish Commission. The records consist of letters received and letters sent by Brigham.

**33.25** Press copies of **letters sent, Dec. 1897-Aug. 1899** (1 vol., 1 in.), deal with administrative and technical matters related to procuring, setting up, dismantling, and shipping the exhibits. The letters are chronologically arranged and indexed alphabetically by name of correspondent, firm, department, or agency. The **letters received, 1897-99** (3 in.), are divided into four groups as follows: (1) letters from the president and other officials of the exposition, arranged alphabetically by name of correspondent and thereunder chronologically; (2) letters from chiefs of Bureaus of the Department of Agriculture and others regarding agricultural exhibits, arranged alphabetically by Bureau and thereunder chronologically; (3) letters from other agencies of the Federal Government, arranged alphabetically by name of agency; and (4) letters concerning administrative and accounting matters, arranged alphabetically by name of correspondent. Included in the second group are some letters from Charles R. Dodge, a special agent of the Department.

Records Concerning the
Louisiana Purchase Exposition

**33.26** This exposition was held in St. Louis, MO, from May 1 to December 1, 1904, to commemorate the purchase of the Louisiana Territory from France in 1803. Preliminary steps toward the organization of the celebration were taken by the Missouri Historical Society, but in 1901, Congress appropriated $5,000,000 toward the celebration. The act of March 3, 1901, also authorized the creation of the Louisiana Purchase Exposition Commission whose members were appointed by President William McKinley. Government exhibits were under the supervision of the U.S. Government Board, chaired by J.H. Brigham, the Assistant Secretary of Agriculture. The records of the Board, consisting of three series of letters received by Brigham, document the participation of four of the Department's Bureaus and Offices.

**33.27 Letters received from officials of the exposition, Sept. 1901-Dec. 1902** (1/2 in.), concern various aspects of agricultural exhibits in general and Department exhibits in particular. A map of the exposition site is included in this series. **Letters received from Government agencies participating in the exposition, Oct. 1901-Mar. 1905** (1 in.), are arranged alphabetically by department, thereunder by

Bureau, and thereunder chronologically. Requests for positions in connection with Government exhibits, suggestions for additional exhibits, and other matters constitute the **miscellaneous letters received, Aug. 1901-Jan. 1903** (2 in.), which are arranged alphabetically by name of person or organization from whom the letter was received. Included are clippings and other informational material.

Records Concerning the
Alaska-Yukon-Pacific Exposition

**33.28** This exposition was held in Seattle, WA, from June 1 to October 15, 1909. A U.S. Government Board of Managers was appointed to oversee Government exhibits presented by a several agencies; Col. S.R. Burch represented the Department of Agriculture. The Sundry Civil Act of May 27, 1908, which appropriated $600,000 to defray the cost of Government participation, specifically provided for exhibits from the Forest Service, the Office of Experiment Stations, and the Office of Public Roads; exhibits were also presented by the Weather Bureau, the Bureau of Plant Industry, and the Bureau of Entomology. The records consist of a few **letters received, July 1908-May 1909** (negligible), addressed to or referred to the Secretary of Agriculture or Col. S.R. Burch, mostly concerning the legality and degree of participation advisable by the Department, and press copies of **letters sent, Aug. 1908-Aug. 1910** (1 vol., 1 in.), by the Secretary of Agriculture and Colonel Burch concerning managerial and other aspects of Department exhibits at the exposition. The letters in both series are chronologically arranged. The letters sent are indexed alphabetically by name or title of addressee, firm, or Bureau.

MISCELLANEOUS RECORDS

**33.29 Circular letters, Mar. 1908-June 1944** (29 ft.), the most important policy documents issued by the Extension Service, were assigned numeric-decimal numbers serially, beginning over again in 1942. Although most letters are filed chronologically and can thus be located by date, some for the years 1943 and 1944 are filed alphabetically by subject and thereunder chronologically. Letters 1-25 cover the period March 1, 1908, to December 10, 1912.

PHOTOGRAPHIC RECORDS

**33.30** The photographic records for the pre-1913 period are limited to photographic negatives primarily of posters that were used in agency publications, ca. 1910-36 **(B)** and are filed apart from the textual records.

# Record Group 54

## RECORDS OF THE BUREAU OF PLAN INDUSTRY, SOILS, AND AGRICULTURAL ENGINEERING

*Great interest has been manifested recently in the development of agricultural work in the West, especially in connection with the reclamation projects in charge of the United States Geological Survey. The Geological Survey has indicated a desire to secure the cooperation of this Department in connection with its work, mainly along the line of general farm demonstrations. It is recognized by the Reclamation Service that to make their work of practical value it must be demonstrated to the farmers what kinds of crops and systems of agriculture should be followed in connection with the various projects they have under way. By direction of the Secretary, this western agricultural work, which is as yet in a tentative state, has been placed in charge of Mr. Carl S. Scofield.*

*Report of the Chief of Bureau of Plant Industry,* Annual Reports of the Department of Agriculture, Report of the Secretary of Agriculture, Departmental Reports, *1905, p. 66.*

### INTRODUCTION

**54.1** The Bureau of Plant Industry, Soils, and Agricultural Engineering was established in the Agricultural Research Administration of the Department of Agriculture in February 1943 and abolished in 1953, when most of its functions were assumed by the Agricultural Research Service. The Bureau represented the consolidation under one organization of certain types of research work conducted in the Department of Agriculture by the Bureaus of Plant Industry, Soils (designated Chemistry and Soils in 1927), and Agricultural Engineering (designated Agricultural Chemistry and Engineering in 1938) and their predecessors, although the origins of some of its functions are found in the work of the Agricultural Section established in the Patent Office in 1839. Since the records of the Bureau's agricultural engineering functions constitute Record Group 8, Records of the Bureau of Agricultural Engineering, Record Group 54 comprises records of plant and soil investigations and related functions of the other components of the Bureau.

**54.2** Some antecedents of the Bureau of Plant Industry are traceable to the Agricultural Section of the Patent Office, which was responsible for the procurement, propagation, and distribution of new and useful seeds and plants. In 1862 these activities were taken over by the newly established Department of Agriculture, where they were administered and expanded by the Department's Division of Gardens and Grounds and Division of Seeds, created in 1862 and 1868, respectively. As the plant work gradually became more specialized, other divisions were established: Botany in 1869, Pomology in 1886, Vegetable Physiology and Pathology in 1890, and Agrostology in 1895. In 1900, in an effort to coordinate and develop the plant investigations that were conducted by these divisions, the Secretary of Agriculture created the Office of Plant Industry, which was elevated to bureau status in 1901.

**54.3** After 1901 the history of the Bureau of Plant Industry was characterized by the development, both intensive and extensive, of activities along lines already established and also in new fields. Some projects undertaken were later transferred to other bureaus of the Department of Agriculture. Among these were farm management and demonstration work, investigations relating to grain and cotton standardization and marketing of agricultural commodities, and work dealing with the enforcement of the Federal Seed Act. As its functions increased, the Bureau tended to increase the number of its administrative units by successive subdivisions and additions, so that by 1917 its scientific work was being handled by 32 offices or units. After 1917 the Bureau gradually tended to establish larger administrative units by the consolidation of some of the smaller ones.

**54.4** While plant research developed in the Bureau of Plant Industry, soil investigations, which were subsequently to be merged with this research, originated in the Bureau of Soils. The latter Bureau was an outgrowth of the Division of Agricultural Soils, established in the Weather Bureau on February 15, 1894. The Division, which obtained independent sta-

tus within the Department on July 1, 1895, was charged with making investigations on the relation of soils to climate and organic life and on the texture and composition of soils. Its name was changed to Division of Soils in 1897, and under provision of the Department of Agriculture appropriation act for fiscal year 1902, the Division of Soils became the Bureau of Soils. Major functions of the new Bureau were the surveying, classifying, and mapping of the soils of the United States, which its predecessor had begun in 1899; investigation of the chemical properties of soils in their relation to plant growth; examination and analysis of various soil types and the study of their requirements for fertilizers; investigation of the causes and remedies for infertility in certain kinds of soils; and exploration and investigation regarding the development of resources for suitable fertilizer materials. For several years the Bureau also made special surveys of alkali soils in the Western States and soils used for tobacco culture, and investigated the relation of soils to drainage and seepage waters. The functions of the Bureau of Soils were performed by divisions or other units designated as Laboratories, Soil Survey, Soil Management, Fertility Investigations, and Soil-Water Investigations until about 1912 and thereafter by divisions designated as Soil Survey, Soil Chemistry, Soil Physics, and Fertilizer Resources.

**54.5** The records discussed in this chapter consist of all of the relevant records of the Bureau of Plant Industry and its predecessors dating from 1881 and the pertinent records of the Bureau of Soils and its predecessors from 1894. Two series of records relevant to this guide are held by the National Archives--Central Plains Region, in Kansas City, MO (54.56), and another relatively small series is held by the National Archives--Pacific Southwest Region, in Laguna Niguel, CA (54.75). The remainder of the records are in the National Archives at College Park, MD. All of the records in this record group that were held by the National Archives as of December 1953 are described in some detail in *Preliminary Inventory of the Records of the Bureau of Plant Industry, Soils, and Agricultural Engineering* (PI 66), compiled by Harold T. Pinkett and published in 1954. Records received by the National Archives between 1953 and October 1965 are described in NC-135, "Records of the Bureau of Plant Industry, Soils, and Agricultural Engineering (Record Group 54), A Supplement to Preliminary Inventory No. 66," compiled by Herbert J. Horwitz and issued in 1965. Descriptions of the few relevant records that have been added to this record group since 1965 are included below. Record copies of publications of the Bureau of Plant Industry, Soils, and Agricultural Engineering are in Record Group 287, Publications of the U.S. Government.

**54.6** Records pertaining to functions performed by the Bureau and its predecessor units are found in other record groups in the National Archives. Division records relating to farm-management work that originated in the Bureau of Plant Industry are among records of the Bureau of Agricultural Economics (Record Group 83) and are discussed in the chapter for that record group. Similarly, records of the Seed Investigations Division of the Bureau of Plant Industry are part of Record Group 136, Records of the Agricultural Marketing Service, while records of plant and soil investigations conducted by the Bureau and continued by its successor are in Record Group 310, Records of the Agricultural Research Service. Because only a few of the records constituting Record Group 136 and Record Group 310 are relevant to this guide, most of the records that are pertinent are discussed in this chapter with related divisional records rather than in separate chapters (see 54.33-54.35 for records in Record Group 136 and 54.38, 54.45, 54.47, 54.52, and 54.81 for records in Record Group 310). A few other relevant records in Record Group 136 are discussed in the chapter for Record Group 17, Records of the Bureau of Animal Industry. The records constituting Record Group 136 are described in the unpublished "Preliminary Inventory of the Records of the Agricultural Marketing Service" (NC-118), compiled by Virgil E. Baugh, and its supplement in the National Archives microfiche edition of preliminary inventories. One series of field records in Record Group 310 is cited in the guide chapter for Record Group 164, Records of the Cooperative State Research Service. A partial inventory of the records of the Agricultural Research Service is included in the microfiche edition of preliminary inventories, but the bulk of the records constituting Record Group 310 have yet to be described in detail.

**54.7** Record Group 16, Records of the Office of the Secretary of Agriculture, includes records relating to the inauguration and development of seed- and plant-introduction activities of the Agricultural Section of the Patent Office and the Department of Agriculture. Also included are copies of letters prepared for the Secretary's signature by the Bureau of Plant Industry, 1906-29; the Bureau of Chemistry, 1906-

29; and the Bureau of Soils, 1906-27. These letters are reproduced as part of National Archives Microfilm Publication M440, *Letters Sent by the Secretary of Agriculture, 1893-1929* (Rolls 396-418, 244-271, and 441-444, respectively). Among the records constituting Record Group 114, Records of the Soil Conservation Service, are correspondence and reports pertaining to soil-erosion and moisture-conservation investigations conducted by predecessors of the Service. Record Group 33, Records of the Extension Service, includes correspondence and reports relating to farm demonstration work of the Bureau of Plant Industry. Correspondence relating to the cooperation of the Office of Experiment Stations and State agricultural experiment stations with the Bureau of Plant Industry and the Bureau of Soils is found in Record Group 164, Records of the Cooperative State Research Service.

**54.8 Editorial Note**: Many records included in Record Group 54 originated after 1912, and they are not described here. Unless otherwise noted, series consisting of records that originated prior to 1913 but extending beyond that date are described in their entirety; no attempt has been made to determine what part of such series relates to the pre-1913 period. Although some maps and photographs are either filed with or are part of textual records, the Bureaus generally maintained cartographic and photographic records as separate collections, and they are filed apart from the textual records. Photographic records that are filed separately are identified by alphabetic collection designators, shown in parentheses, instead of series titles. The separately maintained cartographic and photographic records are discussed at the end of the chapter (54.94-54.98), to prevent confusion with maps and photographs that are actually filed with the textual records. Many of the photographs are general in nature, but cross-references to photographs originating in various divisions are given in the discussions of the related textual records. Architectural and engineering plans, which are filed with the cartographic records, are described with related textual records. Finally, it should be noted that many of the series discussed in this chapter are titled "general correspondence." In most instances this title identifies series made up of letters, memorandums, reports, and other documents accompanying incoming communications and copies of letters sent and similar outgoing documents. In some cases, however, correspondence series may consist only of incoming letters and copies of replies.

## BUREAU OF PLANT INDUSTRY

### General Records

**54.9** Administration of the affairs of the Bureau of Plant Industry and general direction of its investigational activities were vested in the Chief. In carrying out these responsibilities the Chief was assisted by an Associate Chief and an Assistant Chief. By July 1, 1912, the total number of employees in the Bureau was 2,128, of whom 1,281 were located in the field. Of these, 617 were "collaborators," who received only a minimal salary, and 517 were agents, most of whom were engaged in farm demonstration work, with a portion of their salaries paid from outside sources. The personnel of the Bureau included pathologists, physiologists, agriculturists, scientific assistants, physicists, cerealists, agents, collaborators, etc., as well as the various clerical, administrative, and research assistants who handled business and other facilitating operations. The general records of the Bureau are considered to include records of the Office of the Chief and other units sharing in the general administration of the Bureau and files relating to special activities that cannot be readily classified in terms of their origin in particular organizational units.

**54.10** The letters received and copies of letters sent that make up the **general correspondence of the Office of the Chief, 1900-1908** (31 ft.), relate to the work coordinated by the Office of Plant Industry and the early activities of the Bureau of Plant Industry. Included is correspondence concerning experiments in dryland agriculture; early farm management and demonstration work; investigations of the culture, adaptation, improvement, and utilization of agricultural crops; the movement for cotton and grain standardization; and seed examination and distribution activities. The letters are arranged alphabetically by surname of correspondent.

**54.11** The **general correspondence of the Office of the Chief, 1908-53** (627 ft.), which relates to all activities of the Bureau of Plant Industry, includes much material concerning the establishment of new plant industries, introduction of new plants, development of new methods of plant culture or handling, determination of the causes of plant diseases and development of methods for their control, and development of other ideas pertaining to plant production or plant science. The records are arranged in numerical order by file numbers arbitrarily assigned to correspondents and occasionally to subjects. A select list

of subjects and correspondents, with their pertinent file numbers for the period 1908 to 1939, is given in PI 66, appendix I. Listed in the box to the right are those subject headings that include trans-Mississippi State identifiers and their respective file numbers. Access to the correspondence is facilitated by indexes compiled on 2- by 5-inch cards and totaling approximately 178 linear feet. The indexes, described below, are divided into several segments.

**54.12** Entries in a **name index, 1900-52** (96 ft.), arranged alphabetically by surname of correspondent, generally provide the correspondent's address and the pertinent file number. Entries in the principal **subject index to general correspondence of the Office of the Chief, 1908-29** (58 ft.) **and 1930-52** (32 ft.), show the subject and date of correspondence, name of correspondent, and pertinent file number. Similar information is provided by entries in the supplemental **miscellaneous subject index to general correspondence of the Office of the Chief, 1908-30** (28 ft.), which covers the numerous subjects about which only a few letters--not considered sufficiently numerous, important, or pertinent to be indexed in the principal subject file--were filed. The entries in the subject indexes are arranged alphabetically by subject and thereunder chronologically.

**54.13** Although copies of letters sent are found in the correspondence files, press copies of outgoing letters, bound in chronological order, also were maintained. The **letters sent by the Office of the Chief, 1901-29** (675 vols., 86 ft.), deal with all activities of the Bureau of Plant Industry, including those subjects mentioned in 54.10 and 54.11 above. Most of these volumes are indexed by name of correspondent. The volumes of **letters sent by the Assistant Chief, 1904-9** (6 vols., 1 ft.), are indexed by subject. These letters were prepared by Bureau officials in charge of scientific investigations and concern the progress of their work, recommendations for new projects, assignment of personnel, and special information requested by the Chief. After review by the Assistant Chief the letters were forwarded to the Chief. **Letters sent to the Solicitor, Department of Agriculture, 1906-21** (8 vols., 1 ft.), by the Chief of the Bureau concern the legal aspects of the preparation, renewal, and termination of leases and contracts for land, buildings, and other facilities for scientific investigations. These volumes are indexed by name of lessor or contractor or in some cases by subject.

**54.14** Reports, statements of work and of experiment station revenues, personnel registers and related

Arizona Agricultural Experiment Station 17881
Arkansas Agricultural Experiment Station, 6354
California Agricultural Experiment Station, 147
California botanical gardens and arboretums, 4
California fruit growers exchange, 4544
Cheyenne (WY) Horticultural Field Station, 14979
Colorado Agricultural Experiment Station, 4370
Idaho Agricultural Experiment Station, 12167
Kansas Agricultural Experiment Station, 193
Louisiana Agricultural Experiment Station, 671
Minnesota Agricultural Experiment Station, 7895
Missouri Agricultural Experiment Station, 7228
Missouri Botanical Garden, 875, 2745
Montana Agricultural Experiment Station, 5978
Nebraska Agricultural Experiment Station, 63874, 7992
Nevada Agricultural Experiment Station, 14771
North Dakota Agricultural Experiment Station, 232, 7252
Oklahoma Agricultural Experiment Station, 17012
Oregon Agricultural Experiment Station, 4224
Riverside (CA) horticultural investigations, 55
South Dakota Agricultural Experiment Station, 681
Texas Agricultural Experiment Station, 25976
Utah Agricultural Experiment Station, 17407
Washington Agricultural Experiment Station, 1600
Wyoming Agricultural Experiment Station, 19358

documents, salary lists, agreements, circulars, press releases, budget documents, and miscellaneous publications are a few of the types of documents found in the **miscellaneous administrative file, 1900-25** (5 ft.), of Beverly T. Galloway, who served as Bureau Chief from 1901 to 1913. Among the records is a carbon copy of a report, "Experiments and Investigations Conducted by the Bureau of Plant Industry in Cooperation with State Experiment Stations," that provides a brief overview of the projects under way in each State or Territory as of 1907. General projects consisted of a survey of plant diseases in 12 States, including Colorado, Iowa, Nebraska, North Dakota, and Washington; the testing of seeds of alfalfas, vetches, sorghums, cowpeas, and other legumes by Stations in 23 States and Territories, including Arizona, Arkansas, California, Colorado, Idaho, Iowa, Kansas, Louisiana, Missouri, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, and South Dakota; and the testing of seed corn by 26 Stations, including those in Arkansas, Colorado, Idaho, Kansas, Minnesota, Missouri, North Dakota, South Dakota, Texas, Utah, and Washington. An index further identifies the lines of work being carried out, the States and Territories involved, and the surname of the employee(s) in charge of projects. The pertinent entries and relevant States and Territories are listed in the box below.

Alkali resistant crops, breeding: Nebraska
Bacteriological studies, soil: Kansas
Cactus investigations: New Mexico
Cotton experiments: Texas
Crowngall disease of apple, pear, etc.: Arkansas, New Mexico
Date introduction: Arizona, California
Dry Land Agriculture Investigations: Kansas, Nebraska, North Dakota, South Dakota, Texas
Farm Management investigations: Missouri
Forage crop testing: Texas, Washington
Fruit Storage Investigations: Iowa
Grain Investigations: California, Iowa, Kansas, Minnesota, North Dakota, South Dakota, Texas
Irrigated land, crops for: Arizona, Nevada
Orange hybrids (plants sent for trial): Louisiana
Plant breeding: Louisiana, Nebraska, Texas
Plant Disease Investigations (shedding of cotton bolls, apple diseases, pear blight, etc.): Arkansas, California, Nebraska
Plant Life History Investigations of clover and alfalfa: Arizona, Colorado, Minnesota, Nebraska, North Dakota, South Dakota, Utah, Washington
Poisonous Plant Investigations (loco weed): Colorado, Nebraska
Potato experiments:
(1) Effect of soil and climate on yield and quality: Oregon, Texas
(2) Disease resistance tests: Colorado, Oregon
Range Investigations: Arizona
Spraying experiments: Arkansas, California, Nebraska
Sugar Beet Investigations: Montana, South Dakota
Sweet corn experiments to determine effect of environment on sugar content: Minnesota, Missouri, Nebraska
Viticultural Investigations: California

**54.15** Among the many other items of interest in this file are documents relating to dry land agriculture and a 1911 report called "List of Improvements on Experiment Farms Under Control of the Bureau." One of the features of this report is information about the acreage of each farm and the manner in which the land was held by the Government. Also from 1911 are notes on an inspection trip Leon M. Estabrook took to Bellingham, WA, Chico and Los Angeles, CA, Brownsville, TX, Miami, FL, and intermediate points, that contain topographical and weather-related observations and accompanying photographs. Several publications are interspersed throughout the "Miscellaneous" materials; among them are copies of Bureau of Plant Industry Bulletin No. 177, "A Protected Stock Range in Arizona," and Forest Service Circular 178, "The Pasturage System for Handling Range Sheep: Investigations During 1909," both of which were published in 1910.

**54.16** Correspondence, statistical memorandums, and other records furnishing information to be used in the compilation of annual budget estimates for the Bureau constitute the **records relating to budget estimates, 1906-17, 1920-33** (8 ft.), which are arranged by year and thereunder by project. Many of these records concern the Bureau's work in the West. For example, documents relating to the estimate for fiscal year 1907 for the Office of Western Agricultural Extension include a recommendation for the establishment of demonstration farms near Yuma, AZ, and Minidoka, ID, and in certain Reclamation Service irrigation projects, namely the Klamath Project in Northern California, the Truckee-Carson Project in Nevada, and the Hondo Project in New Mexico. The acquisition of some lands used for various Bureau activities is documented by a series of **deeds and title records, 1908-49** (3 ft.). Among these records are original deeds, abstracts of title, and related documents pertaining to the acquisition of land in California, Colorado, Louisiana, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Washington, and Wyoming. Most of these documents relate to property transfers transacted after 1912.

**54.17** The general records also include chronologically arranged press copies of **annual reports, 1903-4** (1 vol., 1 in.), describing various phases of the Bureau's work, and **project plan reports, 1905-23** (12 ft.), arranged by subject and relating to cereal control, crop diseases, foreign seed plant investigations, horticultural investigations, forest pathology, and seed distribution. **Project records relating to crop investigations, 1885-1913** (3 ft.), consist of memorandums of understanding with various State agricultural experiment stations and numbered reports on the status of activities and projects conducted by the Bureau of Plant Industry or outlines for research projects. Information is provided on funding, the object of the research project, the names of the project leaders, the location of the experiment, and the titles of publications relating to subject of the project. The projects dealt with forage crops, plant diseases, vegetables, cereals, fruits, nuts, and fiber crops such as cotton. <u>The file numbers, subjects, and years of some of the pertinent files are listed in the box on the facing page.</u>

**54.18** Correspondence relating to the cactus project and to pomological investigations can be found in a series of **miscellaneous correspondence, reports, and bulletins, 1890-1940** (3 ft.). Also included is a 1909 report, "General Breeding of Oats, at Ames, Iowa," a project conducted under an cooperative agreement with the Iowa Agricultural Experiment Station, and photographs and plates used as illustrations in various Bureau publications, including Bulletin No. 587, concerning the handling and storage of apples in the Pacific Northwest, and Bulletin No. 852, on the management of common storage houses for apples in the Pacific Northwest.

**54.19** A collection of **miscellaneous unidentified records of the Bureau, 1902-40** (16 ft.), consists of numerous single documents and several sets of numerical or alphabetical files that have not as yet been filed with divisional records. Many of these records are administrative in nature, relating to business methods and fiscal matters. Particularly relevant to this guide, however, are press copies of letters sent that were furnished to the Office of the Western Agricultural Extension by two of its field employees. These information copies of letters sent by S.H. Hastings, Superintendent of the San Antonio Experiment Farm, and by W.A. Peterson, Superintendent of the Yuma Experiment Farm, document to some extent the activities of the men during the 1909-12 period. Also originating with the Office of Western Agricultural Extension are three quarterly progress reports on agricultural experiments conducted on Reclamation Service projects in 1909 and early 1910. The most extensive report, which is illustrated with photographs and maps, covers the period April to June, 1910, and discusses work performed at the following projects: Yuma, AZ, CA; Huntley, MT; North Platte, NE, WY; Truckee-Carson, NV; Williston, ND; Umatilla,

| | |
|---|---|
| No. 105 | Truck Growers Association, Boerne, TX (1905) |
| No. 124 | Forage Plant Investigations in Pacific Northwest (1908) |
| No. 140 | Klamath Experimental Farm (1909) |

**Reports on Forage Crop Testing at:**

| | |
|---|---|
| No. 181-A | Pullman, WA (1904) |
| No. 181-C | Akron, CO (1911) |
| No. 181-D | Belle Fourche, SD (1911) |
| No. 181-E | Amarillo, TX (1911) |
| No. 181-F | San Antonio, TX (1911) |
| No. 181-G | Dalhart, TX (1911) |
| No. 181-H | Judith Basin, MT (1908) |
| No. 181-I | Mitchell, NE (1910) |

**Dry Land Agriculture Projects at:**

| | |
|---|---|
| No. 395 | Highmore, SD (1906) |
| No. 397 | Rosebud, SD (1905) |
| No. 398 | Chadron, NE (1905) |
| No. 403 | Las Animas, CO (1905) |
| No. 405 | Chillicothe, TX (1905) |
| No. 407 | Poisonous Properties of Loco Plants Affecting Sheep in Montana (1906) |
| No. 432 | Lichens of Central California (1906) |

**Physical Investigations of Installations at:**

| | |
|---|---|
| No. 546 | Highmore, SD (1908) |
| No. 548 | Rosebud, SD (1906) |
| No. 549 | Chadron, NE (1906) |
| No. 554 | Las Animas, CO (1906) |
| No. 556 | Chillecothe, TX (1906) |
| No. 563 | Experimental Work at Snyder, OK (1907) |
| No. 600 | Texas Plant Garden (1907) |
| No. 614 | Ecological Studies in Colorado (1907) |

**Cotton Culture Farms**

| | |
|---|---|
| No. 625 | Administration (1904) |
| Nos. 626-644 | Texas, by Districts (1904-7) |
| Nos. 645-652 | Louisiana, by Districts (1904-7) |
| Nos. 653-658 | Arkansas, by Districts (1905-7) |
| No. 700 | Farmers Cotton Coop., 20th District, Texas (1906) |
| No. 823 | Minidoka Dry Land Cereal Project [ID] (1908) |
| No. 844 | Tobacco Investigation, California (1907) |

A complete list of the projects is available at the National Archives.

OR; Klamath, OR, CA; and Bell Fourche, SD. Other items of interest are reports on "a Trial of Foreign Muskmelons Made at Brigham City, UT, 1904" and on date palm experiments in Arizona. Other records of the Office of Western Agricultural Extension are described later (54.78-54.80).

## Records of Various Administrative Units

### Records of the Office of Agricultural Technology

**54.20** An Office of Crop Technology Investigations was established in the Bureau of Plant Industry in 1906. This Office became known as the Office of Agricultural Technology in 1909. The Office and its predecessor unit conducted investigations dealing with the improvement of technological methods in crop production and utilization; the technological study of cotton properties as related to growth and manufacture; and the study of free-living and plant-infesting nematodes. The Office's **general correspondence, 1906-14** (42 ft.), deals largely with investigations relating to the standardization of cotton, the testing of plants believed to be suitable for paper manufacture, and the improvement of fiber-plant industries. The records are arranged alphabetically by name of correspondent or subject. Sample headings are Arkansas Agricultural Experiment Station (1912); Arkansas Farmer's Union Cotton Co. (1909-10); Atlas: Agricultural Atlas of the Western United States (a 1908 proposal); California Cotton Mills (1909-12); and Minneapolis Steel and Machinery Co. (1911).

### Records of the Biophysical Laboratory

**54.21** The Physical Laboratory of the Bureau of Plant Industry was established about 1906, and its name changed to Biophysical Laboratory in 1912. In general the objectives of the Laboratory were to devise methods for the quantitative measurement of the physical and physiological factors that modify crop production and to employ such methods to determine the relation of environment to plant growth under different methods of cultivation. Most of its investigations involved the correlation of plant growth with such factors as soil and air temperature, precipitation, humidity, evaporation, amount and distribution of soil moisture, and the permeability and water-holding capacity of soil. Many of these investigations were conducted in cooperation with the Divisions of Dry Land Agriculture and Western Irrigation Agriculture of the Bureau of Plant Industry and with the Bureau of Chemistry and Soils. The records consist of **general correspondence, 1906-20** (13 ft.), covering all types of investigations conducted by the Biophysical Laboratory. The correspondence is arranged numerically on a subject basis, with access facilitated by an **index, 1906-20** (1 ft.), arranged alphabetically by subject and name of correspondent. The entries, compiled on 3- by 5-inch cards, show the name of the correspondent or subject of the correspondence and the pertinent file number.

**54.22** Narrative accounts of various experiments conducted by the laboratory make up a series of **miscellaneous reports, 1907-20** (1 ft.). The reports are arranged by subject, which include the following:

Klamath Marsh Land Experiment Farm
Surface Mat in Forests
Fallon, NV: Special Soil Problems
Williston, ND: Physical Investigations, 1909
Las Animas (CO) Project: 1909
Moisture Relations of Some Great Plains Soils
Dry Land Farming:
- Amarillo, TX
- Belle Fourche, SD
- Crowley, LA
- Dalhart, TX
- Dickinson, ND
- Edgeley, ND
- Fallon, NV
- Garden City, KS
- Huntley, MT
- Judith Basin, MT
- Klamath Falls, OR
- Mitchell, NE
- Moro, OR
- Nephi, UT
- North Platte, NE
- San Antonio, TX
- Williston, ND
- Yuma, AZ

### Records of the Division of Botany

**54.23** The Division of Botany was established in 1869 under an appropriation act authorizing the appointment of a botanist to care for and prepare specimens for a National Herbarium. The position had been authorized by the act of May 15, 1862, that created the Department of Agriculture, but the appointment was not made until 1869. The Division con-

ducted taxonomic and economic plant investigations and disseminated botanical knowledge. Dr. Frederic V. Coville served as Division Director from March 1894 to February 1934, when the Division was merged into the newly created Division of Plant Exploration and Introduction.

**54.24** The divisional records consist primarily of correspondence files and letters sent by various officials but also include a large **reference file, 1894-1934** (18 ft.). This file is composed of notes, memorandums, reports, correspondence, photographs, publications, newspaper clippings, and other records relating to botanical subjects, plant explorations, specific plants, professional organizations, Government committees and commissions, and Division projects. The file is divided into chronological segments covering the periods 1894 to about 1920 and 1920 to 1934; within each segment records are arranged alphabetically by subject. A complete list of the subjects in this series is provided as appendix IV of the supplementary inventory (NC-135), but selected subject headings for the early segment of the series are shown below:

American Indian Native Food Plants
Applegate, Elmer I., Notes on Plant Exploration in Oregon
Arizona Plant Exploration
Black Mesa Plants
Cascade Exploration, Report on
Columbiana Missouriensis (Plants from the Pacific Northwest)
Expositions, 1894-1904
Forest Fires
Garden City, Kansas, Grass Station
Grazing Development Project
Grazing Lands
Jeffrey, John, Report on Oregon Expedition, 1852-53
Jones, M.E., Reports on the Flora of Utah
Klamath (Oregon) Plants
Laboratory Mountain Trip, 1903 [AZ]
Leiberg, J.B., Botanical Reports on Eastern Washington and Idaho
Lewis and Clark Expedition, Botanical Findings
Mazama (Pacific Northwest Exploring Organization)
Mexican Boundary Commission, Botanical Findings
Mexican Boundary Plants
Mount St. Helens, Plants of
Northern Pacific Railroad Lands, Grazing Leases
Oregon Exploration
Oregon Trip, 1896-97, 1902
State Flowers
Texas Range Study
Trees and Shrubs of the Pacific Northwest
Washington State, E.I. Applegate's Notes
Wyoming, Reports on Grazing Lands

The materials filed under the heading "Grazing Lands" include a copy of the *Circular from the General Land Office Showing the Manner of Proceeding to Obtain Title to Public Lands Under the Homestead, Desert Land, and Other Laws* (327 pp.), issued July 11, 1899, and a copy of the *Biennial Report of the State Engineer, Wyoming, 1897-98.*

**54.25** Letters received, copies of letters sent, reports, and other records, arranged alphabetically by name of correspondent and thereunder chronologically, make up the **general correspondence, 1894-1934** (35 ft.), of the Division. This correspondence mainly relates to technical or practical botanical information; identification of specimen seeds, plants, or plant products; botanical or agricultural publications; sample seeds and plants; and requests for botanical information from private persons or films. Many of the reports are from local botanists and field agents concerning local plant or soil conditions.

**54.26 Correspondence with State and Territorial agencies and institutions, 1894-1934** (4 ft.), chiefly State agricultural colleges and experiment stations, concerns request for plants, seeds, publications, specimen identifications, and technical botanical information. The files are arranged alphabetically by name of State, Territory, or institution, and thereunder chronologically. Separate files exist for all of the States west of the Mississippi except Nevada.

**54.27** Other correspondence series are listed below:

1. **Correspondence with executive departments and independent agencies, 1894-1934** (4 ft.), is arranged alphabetically by name of department or agency, thereunder alphabetically by name of office, and thereunder chronologically.

2. **Correspondence with Members of Congress, 1894-1934** (5 in.), which is arranged chronologically, relates chiefly to seeds, plant specimens, plant identifications, botanical publications, specific botanical information, and advice for preparing congressional bills.

3. **Correspondence with scientific institutions and organizations, 1894-1934** (2 ft.), is arranged alphabetically by name of institution or organization and thereunder chronologically.

4. **Intradepartmental correspondence, 1894-1934** (5 ft.), is arranged alphabetically by name of bureau, thereunder alphabetically by name of office, and thereunder chronologically.

5. **Intrabureau correspondence, 1894-1934** (8 ft.), which relates chiefly to the administrative management of the Division, the coordination of Bureau research or special projects, and the exchange of professional knowledge, is arranged by office, beginning with the Chief's office and continuing alphabetically thereafter and thereunder chronologically.

6. **Intradivisional correspondence, 1894-1934** (5 ft.), concerns the general administrative management and scientific work of the Division, the exchange of professional knowledge, and individual reports of divisional activities. The letters are arranged alphabetically by name of employee and thereunder chronologically.

**54.28** The Division maintained several series of letters sent. As might be expected, the most extensive of these is **letters sent by the Botanist, 1893-1936** (118 vols., 19 ft.), composed of chronologically arranged press and carbon copies of letters relating to all phases of the Botanist's functions as head of the Division and to his cooperation with botanical or other scientific organizations. Included are copies of letters prepared by the Botanist for the signature of the Secretary of Agriculture or the Chief of the Bureau. Also included is an indexed press copy file covering March 1893 through June 1931, which is continued in a "reader file" of carbon copies for the period July 1931 though May 1936.

**54.29** The activities of several other employees of the Division are documented by copies of their letters sent. All of the series listed below consist of press copies of letters bound in chronological order. Each volume contains an index arranged alphabetically by name of correspondent. Some of the letters, although not readily identifiable, relate to activities of Bureau employees in the trans-Mississippi West or to the flora indigenous to the region.

1. **Letters sent by F.V. Coville, Curator of the National Herbarium, Sept. 1896-Apr. 1927** (2 vols., 2 in.).

2. **Letters sent by E.S. Steele, Sept. 1897-Oct. 1899, Oct. 1918-Oct. 1919** (2 vols., 2 in.). These letters relate to the culture and processing of perfume-bearing plants and the plant Rubus.

3. **Letters sent by M.G. Kains, special crop culturist, Nov. 1899-Aug. 1900** (1 vol., 1 in.), concerning the culture of ginseng, lilies, and hops.

4. **Letters sent by Walter T. Swingle, agricultural explorer, Apr.-July 1901, Jan. 1906-June 1907** (2 vols., 2 in.), concerning the introductions of the date palm, pistaches, and other plants into the United States, and to investigations of algae.

5. **Letters sent by W.E. Safford, economic botanist, Apr. 1905-Jan. 26, 1926** (12 vols., 2 ft.), collected in unnumbered volumes and relating to the identification and uses of economic plants and plant products; to the destruction of harmful plants; and to other professional activities. A biographical sketch of Mr. Safford is found on page 37 of the first volume of this series (the volume for 1905-13).

6. **Letters sent by P.L. Ricker, Assistant Botanist, May 1905-Aug. 1917** (12 vols., 1 ft.), concerning seed and plant identifications. Included are some requests for publications.

7. **Letters sent by C.F. Wheeler, May 1907-July 1908** (1 vol., 1 in.), concerning plant, seed, and fruit identifications.

8. **Letters sent by W.F. Wight, Assistant Botanist in Charge of Economic Collections, May 1907-Oct. 1912** (3 vols., 3 in.), concerning requests for plant identifications and publications; the collection and preservation of Herbarium material; plant nomenclature; and technical aid to other offices in the Department of Agriculture.

Records of the Section of Seed and Plant Introduction

**54.30** Press copies of **letters sent, Apr. 1899-Apr. 1904** (62 vols., 6 ft.), relate to the location, purchase, and importation of foreign seeds and plants; the transportation of such purchases; the distribution of seeds and plants in the United States; and requests for seeds and publications. Each volume is indexed by name of correspondent, and the letters are arranged chronologically. **Ledgers, Feb. 1898-Aug. 1902** (2 vols., 3 in.), list the seeds and plants imported by the Section and the dates of the introductions, the common and scientific name of the specimens, the place and amount of the purchase, the name of the purchaser, and the extent of distribution of the seeds or plants in the United States. Entries are arranged chronologically by date of seed or plant introduction.

Also available are **letters received from David Fairchild, 1898-1901** (2 vols., 3 in.), a plant introduction special agent, concerning his activities abroad and in the West. The mounted letters include some posted from Arizona, California, and Louisiana.

Records of the Office of Congressional Seed Distribution

**54.31** The distribution of certain varieties of seeds by Members of Congress was fostered by the Agricultural Section of the Patent Office as early as 1839. Providing for this distribution became a major function of the Department of Agriculture especially after 1880, when congressional distribution was specifically provided for in departmental appropriations. In 1902 direction of this work by the Seed Division was placed in the newly created Bureau of Plant Industry. The Seed Division, which became the Office of Congressional Seed Distribution, purchased seeds from commercial firms, sometimes tested them, packed and labeled them, and in close cooperation with Members of Congress, distributed them among constituents of the Members. The Office was discontinued after 1923, when the general distribution of seeds under this system was terminated.

**54.32** A synopsis of the funds appropriated for seed and plant distribution from 1839 to 1922 appears in the volume of the **"Record of Congressional Seed Distribution," 1901-23** (22 vols., 5 ft.), that covers fiscal year 1923. This set of bound records also includes copies of contracts for the purchase of seeds by the Department of Agriculture; statements concerning the types, quantities, costs, purity, and germination of seeds; and copies of circulars and bulletins explaining the use of seeds. Work of the Office for the pre-1913 period is further documented by the records listed below. Press copies of letters in the bound volumes are arranged chronologically, and each volume is indexed by name of correspondent.

1. **A Seed-Distribution Statement, 1881** (1 in.), showing the quantity and types of seeds distributed during fiscal year 1881, contains a tabulation by State and thereunder by Congressmen, farmers, and organizations to whom seeds were sent. Covered are Dakota Territory, Indian Territory, and all other States and Territories west of the Mississippi.

2. **A receipt book relating to congressional seed distribution, 1886-1900** (1 vol., 1 in.), records the types of seed and the amounts distributed to each State and Territory. The entries are indexed and are arranged alphabetically by name of State or Territory.

3. Chronologically arranged **seed-purchase records, 1891-1916** (4 in.), consist mainly of ledgers, copies of contracts, and statements showing types, quantities, and costs of seeds purchased and the names of individuals and firms from whom the seeds were purchased. For example, a statement listing purchases made during fiscal year 1891 shows that seeds were bought from companies in Santa Clara, CA, Omaha, NE, Fergus Falls and Minneapolis, MN, and St. Louis, MO.

4. **Letters sent by the seed purchasing agent, 1893-95** (4 vols., 6 in.), relate mainly to orders for the purchase of seeds.

5. **Letters received by the Assistant Secretary, 1896-97** (2 in.), relating to his general supervision of congressional seed-distribution activities, deal with plans for seed distribution, seed contracts, shipment methods, personnel, and the purity of seeds.

6. **Letters sent by the Assistant Secretary, 1897-1901** (25 vols., 3 ft.), to Members of Congress report action taken on their requests for seeds.

7. **Letters sent by the Director, 1901** (1 vol., 1 in.), informing Members of Congress on the status of their requests for seeds, show the beginning of the transfer of control over congressional seed distribution from the Secretary's Office to the bureau level.

8. **Correspondence and reports relating to seed-distribution policies and procedures, 1901-8** (2 in.), concern quality, quantity, and cost of seeds.

9. **Records relating to seed distribution, 1903-16** (2 ft.), provide a chronological account of the amounts and types of seed distributed under congressional allotment.

10. **Correspondence relating to requests for seeds and plants, 1904-8** (1 ft.), received from private individuals, organizations, and Congressmen, illustrates the varied sources of the requests and the uses alleged to be made of the seeds and plants.

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## Records Transferred to the Agricultural Marketing Service and Now Part of Record Group 136

Records About Seed and Grain Investigations

**54.33** From about 1894 the Division of Botany and, after 1901, the Bureau of Plant Industry made

extensive tests of the purity and quality of seeds. By 1909, in addition to the main laboratory in Washington, DC, three branch seed-testing laboratories had been established in cooperation with the experiment stations of Nebraska, Missouri, and Oregon. At these laboratories many hundreds of samples of seed submitted by farmers and seedsmen were tested for the presence of adulterants and germination, and reports were prepared. The Bureau was later made responsible for enforcement of the first "Federal Seed Act" of August 24, 1912, as amended, which defined the quality of seeds that might be imported into the United States, provided for the coloring of imported red clover and alfalfa seed, and permitted the seizure of misbranded seeds in interstate commerce.

**54.34** Over time, the unit responsible for conducting the seed work had been known variously as Seed Investigations, the Seed Test Laboratory, the Seed Laboratory, and, finally, the Seed Investigations Division. In 1939 that Division and its records were transferred to the Grain and Seed Division of the newly created Agricultural Marketing Service. Most of the Division's records originated after 1912; the series that contain pre-1913 documents are listed below.

1. **Correspondence concerning Federal seed legislation, 1907-40** (5 in.).
2. **Press copies of letters sent by Bureau of Plant Industry officials in charge of the Pure Seed Investigations and enforcement of the Federal Seed Act, 1894-1938** (162 vols., 19 ft.).
3. **Press copies of letters sent by those officials in the Seed Investigations Division who served as officers in the Association of Official Seed Analysts of North America, May 1909-July 1936, with gaps** (3 vols., 4 in.).
4. **Letters received by F.H. Hillman, seed analyst, chiefly concerning seed testing, 1905-37** (2 in.).
5. **Record books of seeds received and placed in the Seed Collection of the National Herbarium, 1894-1906** (7 vols., 1 ft.).
6. **Notes of G.N. Hicks, botanist in the Division of Botany, concerning his seed tests and experiments, 1896-1900** (8 in.).
7. **Regulations promulgated in connection with enforcement of Federal seed laws, 1905-36** (7 in.).

**54.35** Also inherited by the Agricultural Marketing Service, via the Grain Division of the Bureau of Agricultural Economics, are records documenting early investigations of grain marketing that were conducted by the Bureau of Plant Industry. In connection with grain standardization work, the Bureau had, by 1912, established laboratories at a number of the principal grain centers, including Minneapolis, Kansas City, and New Orleans. Three series listed below contain records pre-dating 1913; the fourth contains general information.

1. **A numeric-subject file, 1906-25** (13 ft.), consisting chiefly of copies of reports on grain investigations conducted in the field but also including correspondence, working papers, and various exhibits.
2. **Miscellaneous file concerning grain supervision matters, 1911-31** (8 in.).
3. **Library reference materials on grain supervision ("Supervision File"), 1905-30** (3 ft.).
4. Undated **lists of grain elevators and mills** (2 ft.).

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Records of the Division of Drug and Related Plants

**54.36** Prior to 1905, investigations of drug and poisonous plants were conducted by several different units in the Bureau of Plant Industry. In 1905 this work was transferred to the newly created Division of Drug and Poisonous Plant Investigations, which eventually, about 1929, became the Division of Drug and Related Plants. The Division conducted studies relating to the commercial culture and production of drug, oil-seed, volatile-oil, and related crops; the improvement of the active-principle content of drug plants; and the properties and geographic distribution of various types of poisonous plants. Photographs documenting the work of the Division are discussed in 54.96.

**54.37 Ledgers of expenditures, 1903-8** (4 vols., 5 in.), show funds spent on drug- and poisonous-plant investigations and tea-culture experiments and the names of agents engaged in making them. The tea-culture experiments, 1904-5, were conducted in Texas. A ledger covering expenses for the fiscal year ending June 30, 1905, includes entries for individuals engaged in studies of loco weed and similar poisonous plants that entailed travel in California, Colorado, Idaho, Nebraska, Nevada, Utah, Washington, and Wyoming. Chronologically arranged

newspaper and magazine articles relating to poisonous plants and efforts to encourage the cultivation of drug plants make up a series of **clippings, 1900-1909** (5 vols., 6 in.), which are mounted in scrapbooks. A small quantity of **correspondence relating to drug plants, 1900-1902** (3 in.), is chronologically arranged.

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## Divisional Series Continued by the Agricultural Research Service and Now Part of Record Group 310

**54.38** Narrative reports, 1909-12 on hop growing in California, Oregon, and Washington, which were prepared by James Thompson and other employees of the Office of Drug Plant Investigations, are in a series of **annual and special reports and related records, 1905-71** (14 ft.) of the Plant Science Research Division. Also included are two statistical reports entitled "Number of vines per hill and mean yield per vine per hill, 1909-18," and "Application of the Method of Least Squares to Yield of Hops, Wheatland Plot, California, Second Series, 1912."

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### Records of the Division of Plant Exploration and Introduction

**54.39** The former Division of Foreign Plant Introduction, the Division of Botany, and certain projects of the Division of Cotton, Rubber, and Other Tropical Plants were merged on February 9, 1934, to form the Division of Plant Exploration and Introduction. The work of the Division included experimental work on rubber and other tropical plants, on the control of erosion, and on related projects. The bulk of the divisional records consist of two large files. Correspondence of predecessor units is incorporated into the Division's **general correspondence, 1900-44** (41 ft.), which is arranged alphabetically by correspondent. The file for F.V. Colville contains several documents dealing with Death Valley that are of interest even though they post-date 1912. These are a "List of Plants of Death Valley, California" and copies of notes on changes of place names in Death Valley and on dry-ground shrubs of Death Valley. The second large series consists of bound reports prepared by the staff of the Office of Foreign Seed and Plant Introduction of the Bureau of Plant Industry during the period 1900-38, which are described below.

**54.40** The reports or **project studies, 1900-38** (151 vols., 25 ft.), relate to the search for and introduction of foreign plants in the United States and include charts, photographs, and some correspondence. Volumes 1-141 are arranged alphabetically by name of author. When more than one author contributed to the volume, the author whose name appears first is the only one alphabetized; the name of the others are given in parentheses. The reports in these volumes concern foreign plant expeditions and domestic trips undertaken to assess the progress made in the cultivation of foreign plants in plant introduction gardens and field stations in various parts of the United States. Volumes 142-148 contain reports on plant projects and on plant introduction gardens and field stations, including one at Chico, CA, that were compiled by central office employees. Because the authorship of these volumes is not clear, they are arranged by subject and thereunder chronologically. Volume 149 contains itineraries of foreign expeditions, and volume 150 includes the first 25 issues of the Office publication *Bulletin*, 1908-9.

**54.41** Copies of the reports are available as National Archives Microfilm Publication M840, *Expedition Reports of the Office of Foreign Seed and Plant Introduction of the Department of Agriculture, 1900-1939* (150 rolls). For purposes of the microfilm publication, an index was compiled that identifies geographic areas covered by at least 10 continuous pages of textual or photographic material in a given volume. Table - 54.41 on the following page lists the microfilm publication roll numbers and the numbers, titles, and dates of those volumes containing pre-1913 reports that include 10 or more continuous pages of material for the areas identified in parentheses. Some of the other volumes in this series may well contain pertinent sections that do not total 10 pages; many of the volumes contain information on activities in the States after 1913. Additional **reports of inspection trips and field trips, 1908-23** (5 in.), include a study on the attempted introduction of the Japanese vegetable udo, primarily in California and the Pacific Northwest during the period 1902-18.

**54.42** Among other records attributed to the Division are correspondence and illustrated reports that make up **records relating to the plant introduction garden at Bellingham, WA, 1904-16** (3 in.), and correspondence, reports, and other materials that constitute **records relating to the establishment of the**

## TABLE - 54.41
### Select List of Rolls in Microfilm Publication M840

| Roll No. | Vol. No. | Title and Dates |
|---|---|---|
| 5 | 16 | Western and Southern Trip, Fall 1909 (CA, IA, TX, WA) |
| 5 | 17 | Western and Southern Trip, Spring and Summer 1910 (CA, TX, WA) |
| 5 | 18 | Western Trip, Feb. 17-Apr. 28, 1911 (CA, WA) |
| 5 | 19 | Western Trip, 1911 (CA, CO, TX, WA) |
| 6 | 20 | Western Trip, May-Sept. 1912 (CA, LA, TX, WA) |
| 25 | 94 | Western Trip, May-June 1912 (CA, TX) |
| 28 | 105 | Letters of Frank N. Meyer--First Expedition to China, Manchuria, and Siberia, 1902-12, vol. 1 (CA, MO, TX) |
| 30 | 108 | Letters of Frank N. Meyer--Russia, Siberia, Manchuria, China, and Japan, 1912-15, vol. 4 (TX) |
| 33 | 121 | Arizona and California Trip, 1904-5 |
| 35 | 132 | Trip to Louisiana, Florida, and Michigan, 1912-13 |
| 37 | 142 | Closed Projects [1903-12]:<br>Cork Oak (CA, TX)<br>Flax (MN, ND, SD)<br>Resistant Grape (CA)<br>Manchurian Hemp (CA, MN, NE, TX)<br>European Hop (OR, WA)<br>Paper Plants (CA, TX)<br>Stone Fruits, Trees, and Shrubs [San Antonio] (TX) |
| 37 | 143 | Closed Projects:<br>Reed Matting Lath Investigations, 1908-9 (LA, MO)<br>Matting Plant Investigations, 1904-11 (CA, TX) |
| 38 | 146 | Chico Plant Introduction Field Station Project Reports, 1904-11 (CA) |
| 38 | 147 | Chico Plant Introduction Field Station Project Reports, 1912-15 (CA) |

**plant introduction garden at Brownsville, TX, 1907-14** (1 ft.). Documents in a **historical file, 1903-39** (5 in.), include the Bureau of Plant Industry Bulletin No. 35, *Recent Foreign Explorations as Bearing on the Agricultural Development of the Southern States*, compiled by Special Agent S.A. Knapp and published in 1903, and a paper on the introduction of Kiushu rice in 1899 as a means of improving rice growing conditions in southern Louisiana and Texas. Photographs are discussed in 54.96.

Records of the Division of Cereal Crops and Diseases

**54.43** Cereal investigations were conducted by the Division of Vegetable Pathological and Physiological Investigations until 1906, when a separate Division of Grain Investigations was established. By 1913 the latter Division was known as the Office of Cereal Investigations, and in 1921 this Office assumed responsibility for the work of the Office of Corn Investigations. About 1926 the Office became the Office (and still later the Division) of Cereal Crops and Diseases. The Division and its predecessor units dealt with the genetics, culture, adaptation, and uses of cereal crops; prevention of cereal diseases; cultivation of seed flax; and production and improvement of broom corn. The textual records are described below; photographic rec-ords, including lantern slides, are discussed in 54.96.

**54.44** All phases of the work of the Office of Cereal Investigations and its predecessor units are covered by the **general correspondence, 1895-1917** (41 ft.), much of which pertains to the study, selection, and introduction of hardy and improved foreign varieties of wheat, oats, and barley for cultivation in the United States. The correspondence is arranged by numbers assigned to the correspondents. Access is facilitated by an **index, 1895-1917** (1 ft.), compiled on 3- by 5-inch cards, which is arranged alphabetically by name of correspondent. Entries show the name of the correspondent, the file number for correspondence, and in some instances the date of correspondence. Also included are correspondence files of Mark A. Carleton, head of the Division of Grain Investigations, consisting of **correspondence, 1891-97** (3 in.), documenting his work as an agricultural special agent concerned with cereal diseases, and press copies of **letters sent, 1897-98** (1 vol., 1 in.), relating to his work at the University of Nebraska prior to his appointment as Division Chief.

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## Divisional Series Inherited by the Agricultural Research Service and Now Part of Record Group 310

**54.45** Some additional files, 1894-1912 (4 in.) from Mark A. Carleton's office are found among the records of the Cereal Crops Research Branch in a series identified as **Wheat Conference Records, 1894-1971** (6 ft.). The Carleton material consists of correspondence, arranged alphabetically by surname of correspondent, and a few photographs. Among the latter are portraits of Carleton and a group photograph of participants in the Trans-Missouri Dry Farming Congress, held in Denver, CO, in January 1907.

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**54.46** A large series of **annual research reports from State agricultural experiment stations, 1900-49** (101 ft.), is arranged in two chronological segments covering the periods 1900-39 and 1940-49 and thereunder alphabetically by name of State. These narrative reports, which concern experiments in growing cereal crops conducted by the State experiment stations in cooperation with the Bureau of Plant Industry, provide details on the effects of planting time, water availability, and cultivation methods on production and contain considerable statistical information. All of the trans-Mississippi States are represented, but many of the files do not begin until after 1912. The States covered by pre-1913 materials and the dates of the earliest files for each are as follows: Arkansas (1909), California (1905), Colorado (1908), Idaho (1911), Iowa (1907), Kansas (1902), Minnesota (1905), Montana (1908), Nebraska (1904), New Mexico (1912), North Dakota (1899), Oregon (1909), South Dakota (1901), Texas (1904), Utah (1907), Washington (1903), and Wyoming (1904). A few letters and miscellaneous **reports relating to corn investigations, 1908-14** (5 in.), describe corn improvement work conducted in 17 States by the Bureau of Plant Industry. One example, is the production of drought resistant strains undertaken at Yuma, AZ, and Chico, CA. Included in the file, under the heading "Corn Growers," are lists of farmers in the United States who grew seed corn for sale; names and addresses of corn producers in Nebraska and South Dakota; and the names of sources of various types of corn.

## Divisional Series Continued by the Agricultural Research Service and Now Part of Record Group 310

**54.47** Some Bureau of Plant Industry publications and research materials are found in a series called **records relating to corn and wheat research and the development of hybrid strains, 1879-1956** (2 ft.). These records are arranged by item number. Item 11 is an undated manuscript report titled "Corn as Food Among the North American Indian Tribes," by H. Howard Biggar, of the Office of Corn Investigations. Item 12 is essentially an expanded version of the report. Submitted by Mr. Biggar in 1916, the 87-page report, titled "The Corn Work of the Indians of the Middle West: A Report of Studies Among the Gros Ventres, Mandans, Arikaras, Chippewas, Omahas and the Various Siouan Tribes," is illustrated with photographs and accompanied by a separate photograph album titled "Pictures Taken by H. Howard Biggar and Henry M. Steece Among Middle Western and South Western Indian Tribes, 1916." Filed at the end of the series is an unnumbered scrapbook of materials concerning wheat varieties and culture, 1602-1930, which contains "A History of Denton Wheat and Nortex Oats," a leaflet issued by the Denton County Pedigreed Grain Association, Denton, TX.

### Records of the Division of Forage Crops and Diseases

**54.48** Forage-crop investigations conducted by the Department of Agriculture began in the Division of Botany. In 1895 these investigations were placed in a separate unit, the Division of Agrostology, and in 1901 this Division became a part of the Bureau of Plant Industry. Later the Division was named the Office of Forage Crop Investigations. The Division of Forage Crops and Diseases was established after the Office assumed responsibility, in 1928, for the forage-disease work previously conducted by the Office of Vegetable and Forage Diseases. Investigations conducted by this Division or its predecessors related primarily to the production, improvement, and diseases of all crop plants used for forage, whether as hay, fodder, silage, or pasture, and incidentally of all plants used for green manuring, turf production, and soil binding.

**54.49** The Division's records include a relatively large file of **correspondence with State agricultural experiment stations, 1899-1928** (18 ft.), concerning cooperative work in forage-crop investigations. The records are arranged alphabetically by State, with all of the trans-Mississippi States represented. Arranged alphabetically by name of correspondent is the Division's **general correspondence, 1905-29** (66 ft.), which relates to all activities of the Division. **Project statements, 1908-26** (6 in.), arranged chronologically, describe work accomplished on forage-crop investigations. Included are progress reports, 1910-12, of dry-land forage-crop investigations conducted at various sites in Colorado, Montana, Nebraska, North Dakota, Oregon, South Dakota, Texas, Utah, and Washington.

**54.50** Files documenting the work of several Bureau employees are available. The **office file of A.J. Pieters, 1902-9** (1 ft.), consists mainly of correspondence, reports, and memorandums relating to bulb and flax culture and foreign-plant investigations, accumulated by Pieters, an agronomist. Included are annual reports, 1901-4 and 1908, concerning the use of foreign seeds in plant introduction work and congressional seed distribution; photographs taken at the Chico Plant Introduction Garden and a memorandum on species being considered for cultivation at the garden; copies of agreement forms and contracts; and documents relating to the alfalfa investigations conducted by Charles J. Brand, a physiologist with the Office of Plant Life History Investigations. Brand's files, identified as **records relating to alfalfa culture, 1903-10** (1 ft.), include documents concerning work on alfalfas and clovers conducted at Sacaton and Yuma, AZ; Mecca, Indio, and San Francisco, CA; Manhattan and Stockton, KS; Minneapolis, MN; North Platte, NE; and Logan, UT. An incomplete set of numbered files account for the bulk of the papers. Several of these files (nos. 34, 35, 39, and 41) contain correspondence with persons in Minnesota who knew Wendelin Grimm, an immigrant who developed a particularly hardy strain of alfalfa. These letters provide some information about life and farming methods in Minnesota during the second half of the 19th century. File no. 22 contains a 1907 report on the status of the alfalfa seed industry in Kansas, Nebraska, Colorado, and Utah. A file labeled "Weather Records" (no. 46) is a record of temperatures and precipitation levels for various sites in Arizona, Colorado, Minnesota, Montana, Nebraska, North Dakota, Texas, and Utah, for periods ranging from 1873

to 1904. File no. 33 consists of issues of *The Dakota Farmer* from October and November 1909. A few documents relate to experiments with date palms.

**54.51** The value of the work performed by Bureau employees is evident from the titles of newspaper articles contained in a enveloped marked "personal" that is in the **office file of C.V. Piper, 1903-24** (3 ft.). Piper, who headed the forage-crop investigations in the Bureau, was responsible for the introduction of Sudan grass into the United States, and that accomplishment was lauded in articles that appeared in at least three major newspapers in August, 1915. The *Sunday Star* (Washington, DC) titled its story "A Plant Detective Who Has Made Millions for Dry-Farm Owners," while the *Providence Sunday Journal* called its version "Plant Detective Revolutionizes Land Values." The story in *The Sun*, carried the more mundane title "Plant Detective Finds Grass for Dry Farms." Also in the file are papers relating to the Pacific Northwest. Folders labeled "Blue Mountains" contain a "Catalogue of Plants collected in Eastern Oregon in 1896" (39 pp.); "Type Localities of Plants Along the Lower Columbia River" (8 pp.); "Plants Collected in the Blue Mountains, Washington, Headwaters of the Touchet River, July 11-18, 1896" (12 pp.); and notes on flora of Blue Mountains, Washington.

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## Divisional Series Continued by the Agricultural Research Service and Now Part of Record Group 310

**54.52 Annual and other reports of forage crop investigations, 1899-1970** (51 ft.), received from cooperating experiment stations located throughout the United States, are arranged by State, thereunder by location, and thereunder chronologically. Pre-1913 records, dating from the years indicated, are available for the Western States and locations listed below:

California: Chico (1905)
Colorado: Akron (1908)
Idaho: Gooding (1910)
Kansas: Garden City (1912), Hays (1913)
Montana: Osborn (1911)
Nebraska: Halsey (1910), Mitchell (1910)
Nevada: Carson City (1910)
North Dakota: Dickinson (1906), Edgeley (1910), Fargo (1912)
Oregon: Corvallis (1911), Moro (1910), Union (1910)
South Dakota: Belle Fourche (1908), Brookings (1911), Highmore (1911)
Texas: Amarillo (1906), Brownsville (1909), Chillicothe (1907), Dalhart (1908), San Antonio (1904)

Among the materials for some stations are seed lists and meteorological observations. The Texas records include copies of letters sent in 1899 by H.L. Bentley, of the Grass and Forage Plant Station in Abilene. Also available are **research reports and related records concerning grasses, 1892-1961** (10 in.), that were produced by the various stations. The records are arranged alphabetically by name of grass variety.

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### Records of the Division of Forest Pathology

**54.53** Field study of timber and various diseases affecting forest and fruit trees was begun in the Division of Vegetable Physiology and Pathology about 1899. From 1901 to 1907 investigations of timber and forest-tree diseases were conducted by the Mississippi Valley Laboratory of the Bureau of Plant Industry at St. Louis, MO. After 1907 this work was transferred to Washington, DC, where it was carried on by the Division of Forest Pathology. In cooperation with the Forest Service, the Division studied diseases of shrubs and of forest, woodlot, shade, and ornamental trees, to determine their causes and to develop methods of prevention and control. The Division also studied the problems of decay in lumber, wood products, and structural timber.

**54.54** All types of investigations conducted by the Division of Forest Pathology and its predecessor units are discussed in the press copies of **letters sent, 1901-8** (14 vols., 2 ft.), primarily by Hermann von Schrenk, who was in charge of the Mississippi Valley Laboratory. The letters within each volume are arranged chronologically and indexed by name of correspondent. As might be expected, the Division's **general correspondence, 1907-38** (62 ft.), also relates to all divisional activities. Included is considerable correspondence relating to investigations of forest- and shade-tree diseases of serious economic importance, such as white-pine blister rust, chestnut blight, heart rot of Douglas fir, and blue-stain deterioration of timber. A second large correspondence series,

**correspondence with field personnel, 1907-38** (54 ft.), was designated as "branch" correspondence by the Division, although it consists mainly of letters and other documents exchanged between the Washington office and the field offices of the Division. These records deal largely with administrative matters but also contain information relating to scientific problems and the results of field investigations. Both of the correspondence series are arranged by year and thereunder alphabetically by name of correspondent. Each series includes about one foot of pre-1913 correspondence.

**54.55** Also available is a small quantity of **miscellaneous correspondence, 1908-17** (5 in.), arranged chronologically; **records relating to a cooperative agreement with the Forest Service, 1908-25** (3 in.), concerning investigations of insects and tree diseases; and **records relating to project work, 1907-38** (5 in.).

**54.56** Two series of pertinent records are held by the National Archives--Central Plains Region, in Kansas City, MO. **Letters received by Hermann von Schrenk, 1902** (5 in.), deal largely with his timber preservation work as head of the Mississippi Valley Laboratory. The **office file of George G. Hedgecock, 1901-7** (2 ft.), consists of correspondence and other records relating to Hedgecock's work in plant pathology at the Nebraska Agricultural Experiment Station at Lincoln and the Mississippi Valley Laboratory. Hedgecock was employed as a forest pathologist in the central office of the Bureau of Plant Industry for several years. The records are arranged chronologically.

Records of the Division of Fruit and Vegetable Crops and Diseases

**54.57** The Division of Fruit and Vegetable Crops and Diseases, created in 1933, was a successor unit to several units or parts of units established in the Bureau of Plant Industry. In 1886 the Division of Pomology was established in the Department of Agriculture to study the adaptation of fruit trees to particular soils and climates and to collect and disseminate pomological information to U.S. farmers. This work was absorbed in 1901 by the Bureau of Plant Industry and placed in a Division of Pomological Investigation. During the next few years fruit investigations, except those relating to diseases, were conducted by the Offices of Pomological Collections and Field Investigations in Pomology. At the same time, an Office of Horticultural Investigations had charge of vegetable and flower investigations. In 1913 these offices were consolidated to form the Office of Horticultural and Pomological Investigations, which was later designated the Office of Horticulture. Responsibility for conducting horticultural studies was not limited to the Office of Horticulture, however. In 1928, in an effort to coordinate and consolidate horticultural investigations of the Bureau into a single unit, the Office of Horticultural Crops and Diseases was established by incorporating the following offices or parts of offices: Horticulture; Crop Physiology and Breeding; Fruit Diseases, Vegetable and Forage Diseases, except cotton and forage disease work; Pathological Laboratory, except the photographic unit and work on tobacco diseases; and the physiological section of Plant Geography and Physiology. In 1933 the Office of Horticultural Crops and Diseases became the Division of Fruit and Vegetable Crops and Diseases. In general the Division and its predecessor units conducted investigations in the breeding, culture, diseases, handling, storage, and utilization of fruits, nuts, vegetables, and ornamental plants. Photographs documenting these various activities are discussed in 54.97.

**54.58** The **general correspondence of the Division of Pomology, 1887-1907** (62 ft.), relates largely to work involving the identification of fruit varieties, collection of information pertaining to the origin of varieties, distribution of publications, and dissemination of information concerning the production possibilities of fruits in particular localities. The records are arranged chronologically, but a **name index to general correspondence, 1887-1904** (50 ft.), and registers (see 54.60) facilitate access to parts of the correspondence. Entries in the index, compiled on 2- by 5-inch cards, show the name of the correspondent and date and general subject matter of the correspondence. The entries are arranged alphabetically by name of correspondent.

**54.59** The index described above can also be used to access the **general correspondence of the Office of Field Investigations in Pomology, 1902-13** (112 ft.), which is arranged alphabetically by name of correspondent. The letters relate to investigations of improved methods of growing, handling, shipping, storing, and marketing perishable fruits. Included is material relating to the development of refrigeration equipment and methods for shipping fruits. Additional indexes that apply only to this series are discussed below; all of them are compiled on 2- by 5-inch cards:

1. Entries in a **name index to general correspondence, 1904-8** (22 ft.), show the name of the correspondent, the date of receipt of or answer to the letter, and its subject. The entries are arranged alphabetically by correspondent's name.

2. Entries in an **administrative subject index to correspondence, 1903-10** (24 ft.), identify the administrative matter addressed by the communication, the date of the communication, and the name of the correspondent. The entries are arranged alphabetically by subject.

3. Entries in a **name index to letters sent by the Office, 1903-9** (9 ft.), identify copies of Office replies that are filed with incoming inquiries in the general correspondence. The entries, which are arranged alphabetically by name of correspondent, show the name of the correspondent, the subject of the letter, and the date of the reply.

4. Entries in a **crop index to correspondence, 1903-10** (13 ft.), show the subject matter and date of the letter and the name of the correspondent. Entries are arranged alphabetically by name of fruit crop.

All expenditures for fruit investigations are recorded in **ledgers of expenditures, 1904-9** (6 vols., 1 ft.). Filed with the cartographic records and apart from textual records are architectural and engineering plans consisting of **blueprints of experimental refrigerated buildings and railroad cars, 1909- 20** (69 items).

**54.60 General correspondence of the Office of Pomological Collections, 1907-12** (50 ft.), arranged alphabetically by name of correspondent, deals mainly with the maintenance of collections of pomological material, identification and description of fruit varieties, and the collection and dissemination of general information pertaining to the fruit interests of the United States. Access is facilitated somewhat by **correspondence registers, 1894-1912** (49 vols., 2 ft.), which serve as a chronological index to most of the general correspondence of the Division of Pomology (54.58) as well as to that of the Office of Pomological Collections. The entries, compiled in 5 1/2- by 8 3/4-inch notebooks, show the name and locality of the correspondents and the dates and subjects of the letters received and sent.

**54.61** Pomological investigations in California are documented by four series of records. **Correspondence with the California Agricultural Experiment Station, 1890-1907** (1 ft.), concerns the cooperation of the Bureau of Plant Industry and its predecessors with the State agency in efforts to introduce date palms and other fruit trees in California. These records are chronologically arranged. The correspondence making up the **office file of A.V. Stubenranch, 1904-6** (6 in.), an employee of the California Agricultural Experiment Station, is arranged alphabetically by name of correspondent. Most of the letters relate to fruit investigations. Letters and reports concerning pomological investigations in California and the Pacific Northwest are found in a series called **miscellaneous correspondence relating to cooperative extension work, 1904-15** (10 in.), which is arranged chiefly by subject.

**54.62** A considerable amount of information on pear blight in California is found in the **office file of Merton B. Waite, 1906-8** (5 in.), who for several years was responsible for investigations conducted by the Bureau's Office of Fruit Diseases. The file consists mainly of chronologically arranged correspondence and reports relating to costs, results, and progress in fruit-disease investigations. The work of the Office of Fruit Diseases during M.B. Waite's tenure is further documented by chronologically arranged press copies of **letters sent relating to fruit-disease investigations, 1907-8** (4 vols.).

**54.63** Other records of the Division of Pomology and its predecessors that may be of some interest are discussed below. Unless noted otherwise, the records are arranged chronologically.

1. **Notebooks of Townend Glover, ca. 1853-91** (4 vols., 5 in.), mainly contain observations on the characteristics of many types of fruit. In 1853 Glover sold his collection of colored models of fruit from various sections of the United States to the Federal Government for $10,000. Some years later he was appointed entomologist for the newly created Department of Agriculture.

2. **Records relating to fruit lists, 1899-1908** (1 ft.), consist mainly of correspondence, lists, and descriptive statements, about fruits recommended for cultivation in various regions. The lists were compiled with the cooperation of pomological societies.

3. **Correspondence relating to pomological nomenclature, 1910** (2 ft.), concerns the efforts of E.R. Lake, "Expert in Pomological Nomenclature," to obtain information from nurseries, State agricultural experiment stations, horticultural societies, and similar sources to be used in publications of the Bureau of Plant Industry dealing with fruit nomenclature. These records are arranged alphabetically by name of correspondent.

4. **Journals of receipt and distribution of new fruit specimens, 1886-1907** (4 vols., 1 ft.), relate to the Division's work involving the identification of specimens of new, promising, and untried varieties of fruit received from foreign as well as domestic regions and the distribution of the specimens to growers for experimental cultivation. Entries in the journals show the names of varieties received and of the growers to whom they were distributed.

5. **Journals of receipt of fruit specimens, 1886-1941** (29 vols., 4 ft.), relate to work involving the identification of fruit specimens sent by growers to the Division of Pomology and its successor units. Entries in the journals give technical descriptions of the specimens and show whether photographs, models, or paintings were made of them for divisional exhibits. Volume 29 contains a statement on the history of the journals prepared in 1941 by H.P. Gould, head of the Division of Fruit and Vegetable Crops and Diseases. Access to the contents of the journals is facilitated by an index compiled on 2- by 5-inch cards. Entries in the **variety index, 1886-1941** (81 ft.), show the name of the fruit variety received, the date of receipt, the accession number as recorded in the journal of receipt, and the name of the sender. Entries are arranged alphabetically by name of the fruit variety.

**54.64 General correspondence of the Office of Horticultural Investigations, 1901-13** (42 ft.), relates to the growing, handling, and marketing of vegetables and flowers and is arranged numerically on the basis of subject or name of correspondent. A list of the file numbers and their corresponding subjects is provided in a ledger identified as a **numerical index to general correspondence, 1901-13** (1 vol., 1 in.). **A name and subject index to the general correspondence, 1901-13** (15 ft.), compiled on 4- by 6 1/2-inch cards, shows the name of correspondent and subject, date, and file number of letter. The entries are arranged alphabetically by name of correspondent or subject. Also available is chronologically arranged **correspondence of the Office of Horticultural Investigations with the Chief of the Bureau of Plant Industry, 1901-13** (1 ft.), relating to personnel, projects, field trips, publications, and other matters.

**54.65** Several series document crop physiology and plant breeding activities of the Bureau and its predecessors. **Correspondence relating to crop physiology and plant pathology, 1898-1935** (6 ft.), arranged alphabetically by name of correspondent or by subject, deals with investigations designed to determine the factors that influence the culture and breeding of crop plants. A numerical classification scheme was used to arrange the **correspondence relating to crop-physiology and plant-breeding investigations, 1906-9** (3 ft.), which includes a considerable amount of material relating to physiological and breeding studies of cotton, tobacco, and fruits made by J.J. Webber and A.D. Shamel, plant physiologists. **Correspondence relating to investigations of alkali- and drought-resistant plants, 1908-9** (1 ft.), dealing largely with investigations by T.H. Kearney, plant physiologist, is arranged alphabetically by name of correspondent. Some press copies of **letters of authorization relating to plant-breeding investigations, 1908-9** (1 vol., 1 in.), sent by the Chief of the Bureau to heads of plant-breeding projects, are arranged chronologically. Also arranged chronologically are press copies of **letters sent by M.G. Kains, 1897-99** (1 vol., 1 in.). Kains, a special agent of the Divison of Botany, was in charge of the investigation of new and little-known field crops, and several of his letters concern chicory and bulbous crops.

Records of the Division of Sugar Plant Investigations

**54.66** Investigations of the diseases of and methods of producing sugar crops were carried on during the 1890's by the Division of Vegetable Physiology and Pathology of the Department of Agriculture. During the early years of the Bureau of Plant Industry these investigations were continued and expanded in the Bureau's Division of Vegetable Pathological and Physiological Investigations and Office of Cotton and Truck Disease and Sugar-Plant Investigations. About 1914 a separate unit for sugar-crop investigations, eventually designated the Division of Sugar Plant Investigations, was established. This unit was concerned with the study of factors affecting the production and improvement of sugar-producing plants, including the control of diseases as well as the breeding, selection, and importation of varieties, cultural methods, the handling and utilization of the raw material and by-products, and the relation of sugar crops to other farm activities.

**54.67** Correspondence, reports, statistical compilations, copies of manuscripts, and other records concerning sugar beets constitute the **office files of Pathologist C.O. Townsend, 1904-23** (2 ft.). Among the records, which are arranged in rough alphabetical order by subject title, are State files for Colorado,

Minnesota, Texas, and Washington; reports received in 1909 from sugar companies in Western States on the incidence of curly top disease in sugar beets; status reports on sugar beet projects; fertilizer data, 1904-6; and "Old Analytical Data, 1902-8," consisting of statistical information submitted by companies in California, Colorado, Idaho, Minnesota, Nevada, Oregon, South Dakota, Utah, and Washington. A small series of **miscellaneous reports, 1903-9** (1 in.), arranged by subject, relates to fertilization experiments with sugar beets, dry farming, sugar-beet seed, and other subjects. A more extensive series of **annual and other reports on sugar beets, 1910-52** (13 ft.), is arranged alphabetically by name of employee reporting. Some chronologically arranged correspondence, memorandums, and other documents make up a series of **records relating to the history of sugar-plant investigations, 1907-39** (2 in.), conducted by the Department of Agriculture.

Records of the Division of Vegetable Pathological and Physiological Investigations

**54.68** In 1886 the Mycological Section was established in the Divison of Botany to conduct investigations of plant diseases caused by fungi. These investigations were taken over in 1887 by the Section of Vegetable Pathology. The Section became a separate division in the Department of Agriculture in 1890, and in 1895 it was named the Division of Vegetable Physiology and Pathology. In 1901 the Division became a part of the Bureau of Plant Industry and its work was subsequently absorbed and expanded by the Division of Vegetable Pathological and Physiological Investigations, which was a unit in the Bureau until 1906. By this time the work of the Division had come to be directed by the Assistant Chief of the Bureau and included investigations of plant pathology, physiology, breeding, and life history in laboratories at Washington, DC, Santa Ana, CA, St. Louis, MO, and Miami, FL, and special investigations of various crop plants in many States. After 1906 the pathological and physiological work of the Bureau was subdivided among several coordinate divisions. The records of the Division of Vegetable Pathological and Physiological Investigations described here include some correspondence that was accumulated after the Division's discontinuance in 1906 and some dealing with the bureauwide and personal interests of its head, the Assistant Chief of the Bureau of Plant Industry.

**54.69** The letters received by the Division of Vegetable Physiology and Pathology cover the period 1891-1908 and relate to all phases of the Division's work. The letters are divided into three chronological segments: **general letters received, 1891-1900** (22 ft.); **general letters received, 1901-2** (10 ft.); and **general letters received, 1903-8** (31 ft.). These letters describe some of the earliest investigations by Agriculture Department scientists of diseases of cereals, sugar beets, tobacco, fruits, and forest trees. Evident from the 1903-8 segment is the expansion of plant pathological investigations and early efforts toward the breeding of improved varieties of cotton, citrus fruits, corn, and tobacco.

**54.70** The letters are not arranged in a uniform fashion. The 1901-2 segment is arranged alphabetically by name of correspondent. The first and third segments are arranged by name of correspondent according to a numerical filing scheme. Access to these letters is facilitated by two indexes, compiled on 2- by 5-inch cards. The entries in a **correspondent index, 1891-1908** (31 ft.), which are arranged alphabetically by name of correspondent, also give the date, subject, and file number of the incoming letter. A **subject index, 1891-1908** (23 ft.), arranged alphabetically by subject, shows subject, date, and file number of the letter received. Both indexes provide references to the number and page of the press copy volume containing the Division's reply to the incoming letter.

**54.71** The press copies covered by the indexes constitute the **general letters sent, 1894-1906** (173 vols., 19 ft.). This series begins with volume 8; volumes 1-7 (1891-93) are missing. The letters, which are arranged chronologically, relate to plant pathological and physiological work and consist primarily of replies to the incoming letters.

**54.72 Letters sent, 1885-88** (5 vols., 6 in.), primarily by F. Lamson-Scribner, Assistant Botanist and later Chief of the Section of Vegetable Pathology, and his successor as Chief, B.T. Galloway, relate to early plant-disease investigations. Some of the letters were signed in the Office of the Commissioner of Agriculture, an example being a letter of September 25, 1888, instructing a Special Agent in Great Falls, MT, who was conducting an investigation of fungus diseases of plants, to visit Canyon Creek, Helena, Centerville, Willow Creek, Twin Bridges, Dillon, Alderdice, Spring Hill, Willis, Silver Bow, Warm Springs, Deer Lodge City, Missoula, Paradise, Thompson, Big Cut, and Pend d'Oreille before November 15. Each

volume is indexed by name of correspondent, and the letters within each volume are arranged chronologically. The related incoming letters are missing. **Letters sent by B.T. Galloway, 1895-96** (1 vol., 1 in.), during his tenure as head of the Division of Vegetable Physiology and Pathology, deal with recommendations for appointment, Galloway's interest in violet culture, and miscellaneous matters. The letters are arranged chronologically.

**54.73 Letters sent by A.F. Woods, 1900-11** (2 vols., 2 in.), who was head of the Division of Vegetable Pathological and Physiological Investigations, relate to recommendations for appointment and promotion, legislation and budget estimates, Woods' membership in scientific and civic associations, his papers on scientific subjects, and other matters. Several letters are marked "personal" or "confidential." Included in the volumes are copies of reports regarding the work of the Division. Each volume is indexed by name of correspondent, and the letters are arranged chronologically.

**54.74** An account of all types of expenditures involved in carrying out plant pathological and physiological investigations is provided in a set of **ledgers of expenditures, 1893-1905** (5 vols., 8 in.). Press copies of **letters of authorization, 1901-2** (1 vol., 1 in.), arranged chronologically, document the approval of the Secretary of Agriculture for Bureau scientists to conduct some of these investigations at field laboratories and in various States. The volume is indexed by name of scientist.

**54.75** Available at the National Archives--Pacific Southwest Region, in Laguna Niguel, CA, are **letters sent relating to Pacific Coast work, 1892-1902** (4 vols., 5 in.). These press copies of letters sent by Newton B. Pierce, a pathologist stationed at Santa Ana, CA, relate to efforts to combat diseases of grapes, walnuts, and other crops and to breed improved varieties of fruits and nuts. The letters within each volume are arranged chronologically, and each volume is indexed by name of correspondent.

Records of the Division of Tobacco and Plant Nutrition Investigations

**54.76** In 1908 tobacco investigations, formerly conducted successively by the Division of Vegetable Pathological and Physiological Investigations and the Divison of Plant Breeding Investigations, were placed in the newly created Office (later Division) of Tobacco and Plant Nutrition Investigations. The investigations covered all phases of growing, curing, and handling tobacco, with the exception of the study and control of tobacco insects. Included were experiments and demonstrations in tobacco production in several States, including Texas. The plant-nutrition studies of the Division concern the growth and composition of plants as affected by the length of day, the influence of certain crops on others following in rotation, plant-food elements, and relative plant-food requirement of crops commonly grown in rotation.

**54.77** The **general correspondence, 1901-26** (34 ft.), of the Division deals with the inauguration and development of systematic investigations designed to improve the yield and quality of American tobacco crops and of studies of the comparative effects of some of the principal factors of nutrition on plant growth. Access to most of the correspondence, which is arranged in two chronological segments, 1901-21 and 1922-26, and thereunder according to a numeric-classification scheme on the basis of subject or name of correspondent, is facilitated by an **index, 1907-26** (16 ft.), compiled on 3- by 5-inch cards, which gives the name of correspondent and subject of correspondence. The cards are arranged alphabetically by name of correspondent.

Records of the Division of Western Irrigation Agriculture

**54.78** In 1905 the Office of Western Agricultural Extension was established to conduct agricultural work on reclamation projects in cooperation with the U.S. Geological Survey; the circumstances prompting the establishment of the Office are more fully discussed in the epigraph to this chapter. About 1912 the name of the Office was changed to Office of (and, in 1931, Division of) Western Irrigation Agriculture. The Office was concerned with the development of profitable agriculture on lands under irrigation in the Western United States and also with testing of various crops suited for growth under irrigation. These activities have been conducted in close cooperation with the Bureau of Reclamation, Department of the Interior, other bureaus of the Department of Agriculture, and several State agricultural experiment stations.

**54.79** Most of the **general correspondence, 1901-12** (12 ft.), relates to early crop experiments on western reclamation projects conducted under the general direction of Carl S. Scofield. Some of the correspondence, however, concerns Scofield's grain-standardization investigations during the 1901-5 per-

iod. The correspondence is arranged in two chronological segments, 1901-2 and 1903-12. Within each segment the correspondence is arranged alphabetically by name of correspondent. **Letters sent, 1903-15** (8 ft.), concern all activities of the Office of Western Irrigation Agriculture and its predecessor. The letters are press copies, arranged chronologically and filed in folders; some are duplicated in the general correspondence. Another correspondence series documents efforts to introduce Egyptian-type cotton into the agriculture of arid and semiarid regions of the Southwest. Much of the **correspondence relating to cotton culture, 1912-14** (2 ft.), relates to work in the Imperial Valley of California. The letters are arranged alphabetically by name of correspondent.

**54.80** Reports and notes on particular phases of work at experiment farms, plats of crop areas, and reports of irrigation operations make up the **miscellaneous reports and notes relating to experiment farms, 1907-13** (3 ft.). Included are four general surveys, called "Report on the Field Stations of the Office of Western Agricultural Extension," covering October 1, 1910, to June 30, 1912, that provide information on activities at the following experiment farms: Yuma, Scottsbluff, Truckee-Carson, Williston, Umatilla, Klamath, San Antonio, Huntley, Belle Fourche, and, after June 1911, Delta (Middle River) at Moorland, CA. These reports include photographs and plats. The bulk of the series is arranged by farm locality, with materials included for all of the farms listed above except Belle Fourche and Umatilla.

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## Related Cartographic Records of the Agricultural Research Service in Record Group 310

**54.81** Among the general cartographic records of the Agricultural Research Service are two graphs of related interest, showing historical amounts of cropland and pasture in the Great Plains, 1909-56.

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## BUREAU OF CHEMISTRY AND SOILS

### General Records

**54.82** The Chief of the Bureau of Soils and predecessor units had general supervision over administrative and scientific work pertaining to soil investigations. The Chief of the Bureau of Chemistry and Soils had similar responsibilities and was assisted in his duties by an Assistant Chief and the head of a research unit in charge of soil investigations. The general records described here consist of the general correspondence and other records of the Bureau of Soils and predecessor agencies dating from 1894.

**54.83 Letters received, 1894-1901** (7 ft.), by the Division of Soils and its predecessor, the Division of Agricultural Soils, deal with the collection and analysis of soil samples, experimentation in tobacco culture, cooperation with States in soil investigations, and the beginning of the investigation and mapping of the soils of the United States. Copies of replies to these letters are now missing. Beginning in 1901, letters received and copies of letters sent were filed together and arranged according to a numerical system based upon subject classification or name of correspondent. Access to the 1906-27 portion of the **general correspondence, 1901-27** (318 ft.), is facilitated by two indexes, both compiled on 3- by 5-inch cards. Entries in the **name index, 1906-28** (99 ft.), arranged alphabetically by name of correspondent, show the name of the correspondent and subject and the appropriate file number. Entries in the **subject index, 1906-28** (64 ft.), arranged alphabetically by subject, give the subject and file number of the correspondence and the name of the correspondent. The letters themselves relate to all activities of the Bureau of Soils. A considerable amount of the correspondence pertains to soil-mapping work and to studies of soil fertility, the chemical and physical properties of soils, and the development of resources in fertilizer materials.

**54.84** The appointments, resignations, and other personnel actions affecting employees of the Bureau of Soils are documented by two series of records: **miscellaneous personnel records, 1905-26** (5 in.), and **personnel notifications, 1906-22** (1 ft.). Both series of records are arranged alphabetically by name of employee. Also available is a **record of assignments of soil survey parties for the field seasons of 1904, 1903** (negligible). These printed sheets issued in 1903 cover assignments effective January 1, 1904, for "Winter months only." A sample entry is the following: "4. Carter and Kocher will proceed to Gilmer, Tex., and survey all of Upshur County."

**54.85** A collection of **miscellaneous manuscripts, ca. 1905-27** (1 ft.), includes copies of several reports relating to Western States, as listed below,

along with the names of the authors and the dates of the reports, where known.

1. "A General Report on the Soils of the Humid Region of Texas" and "The Story of Texas" (submitted by W.T. Carter, Jr., in 1908). The former is an official report; the latter is a courtesy copy of a manuscript prepared at the request of the Educational Committee of the Texas Farmers' Congress.

2. "Soil Resources of the San Luis Valley, Colorado" (prepared by Macy H. Lapham, a scientist with the Soil Survey, ca. 1911).

3. "Report on the Natural Phosphates of Tennessee, Kentucky, and Arkansas" (prepared by W.H. Waggaman, a scientist with Investigations of Fertilizer Resources, ca. 1911).

4. "Soils of Area Adjacent to Cheyenne, Wyoming."

5. Brief reports, ca. 1905, on soils of experimental tracts in Colorado (near Rocky Ford and Loveland), Nebraska (near Lexington and in Chase County), and Utah (near Huntington).

## Divisional Records

### Records of the Fertilizer Research Division

**54.86** Fertilizer investigations constituted a part of the work of the Bureau of Soils for several years prior to the establishment in about 1913 of a Division of Fertilizer Investigations in the Bureau. After several name changes, this unit was titled the Fertilizer Research Division in 1935. The fertilizer investigations of the Bureau of Soils and its successors were directed toward basic research on the chemical and physical properties of fertilizer and its production and utilization. The research was recorded on **data sheets relating to fertilizer experiments, 1882-1905** (16 ft.). Informational elements captured included the year, the name of the station where the experiment was performed, the crop, the type of fertilizer being tested, and the quantity used. The sheets are arranged in several alphabetical segments chiefly by name of fertilizer. Interspersed are sheets recording personnel actions of Bureau employees.

### Records of the Soil Chemistry and Physics Research Division

**54.87** Examination of soil types to determine their chemical and physical properties constituted one of the earliest activities of the Bureau of Soils. About 1914 soil chemistry and physics investigation of the Bureau began to be conducted by special units; these units were combined in 1935 to form the Soil Chemistry and Physics Research Division of the Bureau of Chemistry and Soils. The Division and its predecessor units examined soil samples submitted by the Soil Survey Division and its predecessor units, other agencies of the Government, and farmers; conducted research on the chemical composition and properties of soils in general; and carried on studies concerning moisture content, heat conductivity, texture, and other physical characteristics of soil.

**54.88 Records relating to a well survey, 1910** (4 ft.), directed by W.J. McGee, a noted geologist and soil scientist, consist mainly of "well circulars" (questionnaires) filled out by farmers and submitted to the Bureau of Soils. The circulars were designed to ascertain the depth of ground water as indicated by wells in various areas and to obtain information on variations in the depth of standing water in wells. It appears that part of the survey results are missing, but the records that are available are arranged alphabetically by State and thereunder by county. Circulars are present for Arizona Territory and the following States: Arkansas, California, Colorado, Idaho, Kansas, Louisiana, Minnesota, Missouri, Montana, and Nebraska.

### Records of the Soil Survey Division

#### Textual Records

**54.89** The Division of Soils of the Department of Agriculture had begun conducting soil survey investigations as early as 1898. Under the Bureau of Chemistry and Soils the work of surveying and classifying the soils of the United States and its dependencies was undertaken by the Soil Survey Division. The Division conducted both reconnaissance and detailed soil surveys and classified lands in irrigation projects, national forests, and other areas; studied the relation of soil types to crops; and collected and disseminated soil information. The work was carried on mainly by the detailed study of small unit areas such as counties and experiment-station farms, often in cooperation with State agencies.

**54.90** Appropriately enough, the main series of divisional records is an extensive set of **reports on soil surveys, 1899-1927** (369 ft.). These are largely reports and related correspondence pertaining to administrative and scientific aspects of field survey

work and containing a considerable amount of data concerning characteristics of the Nation's soils. For the most part, chiefly the period 1901-12, the records are arranged by year, thereunder alphabetically by State, and thereunder by county or by metropolitan or geographical area. The number of Western States covered by the annual increments varies from year to year, i.e., from 5 in 1901 to 17 in 1903. The earlier records, some of which are also dated 1901, are arranged by subject, and they are discussed below.

**54.91** The early records include "field correspondence" files for the following employees: Thomas H. Means, reporting from Arizona Territory and California, 1899-1900; J. Garnett Holmes, writing from Santa Anna, CA, in 1900; and Clarence W. Dorsey and William G. Smith, writing from Louisiana in 1899 and 1900, respectively. The Smith file includes a copy of a soil survey of Louisiana. Also in these early records is a file for New Mexico containing papers relating to a controversy over work conducted by the Division of Soils in the Pecos Valley. In addition to correspondence, the file contains copies of several publications, among which are U.S. Department of Agriculture (USDA) Report No. 64, *Field Operations of the Division of Soils, 1899* (1900); USDA Report No. 70, *Exhaustion and Abandonment of Soils* (1901); revised USDA Bulletin No. 52, *Experiments with Sugar Beets in 1897* (1899); issues of *The Pecos Valley Argus* (Carlsbad, Eddy P.O., NM), for March 31, April 14, and May 26, 1899; *The Irrigation Age: A Journal of Western America* (Sept. 1900, Vol. XIV, No. 12); and *Irrigation Conquers Drouth in the Pecos Valley of New Mexico*, issued by the Pecos Irrigation Company, Carlsbad, NM, 1901.

**54.92** A relatively small series of **miscellaneous soil studies conducted in counties of North Carolina, Oregon, and South Carolina, 1911** (2 ft.), includes studies for the Medford area of Jackson County and the Rogue River Valley in Oregon. Also available are **Soil Survey area expense cards, 1909-14** (2 ft.), which are arranged by State and thereunder by county or area.

Cartographic Records

**54.93 Manuscript soil survey field sheets, 1898-1953** (37,000 items), constitute the bulk of the segregated cartographic records (39,317 items). These field maps, generally on the scale of 1 inch to 1 mile, show the results of soil surveys of particular counties and other local areas of the United States. The maps are arranged by State and are often accompanied by corollary materials, such as map keys to soils and calculations of proportionate area of soil types. **County soil survey maps, 1898-1954** (2,237 items), show the distribution of soil types. Some of the maps covering areas in the Western States are reproduced from reconnaissance surveys; most of the maps, however, are reproduced from detailed surveys. The maps are arranged alphabetically by name of State and thereunder by name of county. A catalog, compiled on 3- by 5-inch cards, lists the maps in the same order. Similar card catalogs facilitate access to **alkali maps, 1900-36** (44 items), primarily of the Western States, showing percent of alkali in the soil, and **underground water maps, 1900-1904** (10 items), primarily of counties in Western States, showing the depth of underground waters. The maps in both of these series are arranged alphabetically by name of State and thereunder by name of county.

## GENERAL PHOTOGRAPHIC RECORDS

**54.94** Several series of photographic prints document the numerous activities conducted by the Bureau and its predecessors. Most of these series concern diverse subjects. Typical is the general series for the period 1883-1941 (**F**), which covers the cultivation, harvesting, and processing of fruits, vegetables, and nuts; diseased plants; Theodore Roosevelt planting trees in California in 1903; and fairs, exhibits, and memorials, including the 1904 Louisiana Purchase Exposition in St. Louis, MO. Photographs taken by the Bureau of Plant Industry to document research on vegetable varieties and aspects of vegetable growing, 1897-1953 (**VV**), show field scenes, workers performing a variety of tasks, horse-drawn and motorized farm equipment, greenhouses, storage cellars, cold frames, and canning plants. California is one of the States most widely represented in this series. Other series of prints document research of the effects of vegetable diseases and show markets, cultivated fields, farm laborers, and irrigation methods, 1901-34 (**VD**), as well as the cultivation, processing, storage, and marketing of fruits, 1889-24 (**FF**), and rural, city, and suburban homes, landscaped areas, farmlands, and miscellaneous schools, municipal buildings, and State capitals, 1902-29 (**FT**).

**54.95** A series of photographs of landscapes, 1892-1933 (**L**), taken throughout the United States and in some foreign countries, show cemeteries,

crops, lawns, different types of trees, water falls, mountains, forests, parks, valleys, rivers, streams, canals, deserts, oceans, seas, lakes, harbors, swamps, lava beds, mines, sand dunes, a beaver dam and lodge, settlements along river banks, campsites, plant life along highways and roadsides, freight steamers, waterfront scenes, and street scenes. Miscellaneous views of ornamental plants, 1899-1927 (**HH**), used in various ways in different cities throughout the United States and foreign countries, include images of adobe houses, entrance ways to estates, markets, and homes; bridges, buildings, and sites; business places and factories; fences; gates and gateways; hedges; grafts and grape arbors; and railroad stations and surrounding areas. Mounted prints of ornamental plants, 1892-1940 (**HP**), include views of missions surrounded by plant life in San Gabriel, CA, and San Antonio, TX, and views of plantings around churches in several cities, including Kansas City, KS, and around schools in several States, including California, Oklahoma, Oregon, and Texas.

**54.96** Photographs, ca. 1905-50, from the Division of Drug and Related Plants (**DRG**) show various projects and fieldwork conducted by botanists and other scientists, while photographs, ca. 1901-53, from the Division of Plant Exploration and Introduction and its predecessors (**FS, FSA**) focus on activities of the field stations and experiment gardens, including the Plant Introduction Garden in Chico, CA, and the Huntington Botanic Gardens in San Marino, CA. A large proportion of the collection shows plants and trees in different stages of growth and under varying conditions of cultivation. Photographic records of the Division of Cereal Crops and Diseases include lantern slides (3,100 images) showing culture studies of fruits, vegetables, flowers, trees, and other plants, 1902-41 (**LS, LSF**), and albums of photographic prints from the Office of Corn Investigations, documenting various aspects of corn, 1892-1941 (**CI**).

**54.97** Photographs of horticultural activities, 1892-1952 (**H**), either collected or produced by the Office of Horticultural Investigations and the Office of Pomological Collection and their successors, relate primarily to the cultivation of fruits, nuts, and vegetables. Included, also, are views of packing houses, cultivation and packing machinery, and refrigerated railroad cars. Part of the series concerns the placement of trees in town and city squares and along thoroughfares, as shown in photographs from many towns and cities, including Stockton, CA, and Woodward, OK. Photographs, 1904-46, showing the cultivation and harvesting of food crops (**HC**), include views of activities at the Potato Experiment Station at Greeley, CO. Additional photographs of horticultural and pomological activities, 1900-18, concern the packaging and transport of fruits, vegetables, and nuts (**HPN**) in California and the Southwest. Included is a view of the C.H. Wents winery in Livermore, CA, taken in 1884, and views of models of an elephant, a horse, and the California State Capitol, all fashioned from almonds, walnuts, and pecans for exhibit at the St. Louis Exposition in 1904. While the majority of the photographs in the HPN collection relate directly to the study of horticultural and pomological subjects, many photographs of nonrelated subjects are included. Among these are views of Mt. Shasta, CA; the San Jacinto Mountains in California; the pontoon bridge between Russellville and Dardanelle, AR, which, at more than 2,000 feet, was described as the longest such bridge in the world; the San Gabriel Mission in California; a sod house in Colorado; and the construction of an adobe building.

**54.98** Prints and albums that were prepared by the Division of Tobacco and Plant Nutrition, 1908-36 (**TIA**), show tobacco farms in several States, including Oregon.

# Record Group 83

## RECORDS OF THE BUREAU OF AGRICULTURAL ECONOMICS

*The result of the* [farm-management] *investigations of the past few years is that a vast fund of information has accumulated which the farmer needs and which he is entitled to have. The means of getting this information to the farmer in such a way that everyone may understand it has been the cause of considerable thought on the part of those who have charge of the work. Bulletins have been issued, but for various reasons failed to reach the farmers as effectively as had been hoped. Later, demonstration farms were established with a view to bringing into each community as an object lesson a farm properly equipped and managed. This plan also fell short of what was expected of it. Later, the plan of placing in each county or local area agricultural agents, whose services would be free to every farmer in the locality, has been established and is rapidly developing.* (Report of the Secretary of Agriculture)

*The most important duty of the bureau* [of Statistics] *is the preparation and issuance monthly of reports giving seasonable information concerning the acreage planted to the principal crops of the United States each year (covering approximately 87 per cent of the total crop area of the country), their condition from month to month during the growing season, and their yield per acre, total yield, and quality; also, the condition from month to month and relative production, expressed in percentages of full production, of minor crops.*

*In addition, reports are made regarding the number, status, and values of farm animals, stocks of grain remaining in the possession of farmers at specified dates, and average prices received by farmers for leading products each month. A few other miscellaneous subjects are dealt with, such as causes of crop damage, movement of crops, farm wages, and progress of spring plowing and planting.* (Report of the Chief of the Bureau of Statistics)

Annual Reports of the Department of Agriculture, Report of the Secretary of Agriculture, Reports of Chiefs, *1912, pp. 143 and 781.*

### INTRODUCTION

**83.1** In an effort to consolidate the economic research programs of the Department of Agriculture, the Bureau of Agricultural Economics was established on July 1, 1922, by merging the Bureau of Markets and Crop Estimates with the Office of Farm Management and Farm Economics. The Bureau conducted studies and disseminated information concerning agricultural production, crop estimates, marketing, finance, labor, and other agricultural problems, and administered several regulatory statutes until its reorganization in 1939. The Bureau was abolished in 1953 and its functions divided between the Agricultural Research Service and the Agricultural Marketing Service.

**83.2** The statistical functions of the Bureau may be traced to the 1839 act that allocated $1,000 to the Patent Office for the purpose of collecting and distributing seeds and plants and obtaining statistical and other information on agriculture. The statistical work authorized by this act was continued and expanded by the Division of Statistics, which was set up soon after the Department of Agriculture was established in 1862, and by its successors, the Bureau of Statistics, established in 1903, and the Bureau of Crop Estimates, established in 1914. This work later became an integral part of the Bureau of Agricultural Economics.

**83.3** The early marketing work of the Department consisted largely of studies conducted by the Bureau of Statistics, the Bureau of Plant Industry, and the Bureau of Animal Industry. These studies were made in connection with the regular work of the bureaus, and no attempt was made to separate the technical from the economic functions. The Office of Markets was established on May 16, 1913, in response to demands made by various farmers' groups and in accordance with the appropriation act for fiscal year 1914. The Office was to consolidate the marketing work already being done by the three bureaus, facilitate the expansion of this work, and assist in solving the problems of marketing farm products. More specifically, the work was to include the study and establishment of market grades and standards; the continuation of the work begun in the Bureau of Plant Industry on the marketing and handling of cotton; and studies of cooperative marketing, supply and demand, and the cost of establishing a market news service. By 1917, the Office was also conducting regulatory

and service activities. The increased scope and importance of the work performed by the Office was recognized on July 1, 1917, when its name was changed to the Bureau of Markets. On July 1, 1921, the Bureau of Markets was combined with the Bureau of Crop stimates to form the Bureau of Markets and Crop Estimates.

**83.4** The Department of Agriculture's work on farm management began in connection with grass and forage investigations conducted by the Bureau of Plant Industry. In 1905 the Office of Farm Management was established within the Bureau to promote the work of combining business practices with farming. A reorganization in 1915 transferred the Office from the Bureau of Plant Industry to the Office of the Secretary and assigned responsibility for studies of farm credit and insurance to an enlarged Office of Markets and Rural Organization. The Office of Farm Management was reorganized and designated the Office of Farm Management and Farm Economics in 1919, and in the following year it was removed from the Secretary's Office and set up as an independent administrative unit. Two years later, the Office was combined with the Bureau of Markets and Crop Estimates to form the Bureau of Agricultural Economics.

**83.5** For the most part, the records discussed in this chapter are those created by predecessors of the Bureau of Agricultural Economics and are included in the records described in *Preliminary Inventory of the Records of the Bureau of Agricultural Economics* (PI 104), compiled by Vivian Wiser and published in 1958. Records have been added to Record Group 83 since 1958, but none pre-dates 1913. Also available are Special List No. 17, *Writings Relevant to Farm Management in the Records of the Bureau of Agricultural Economics*, compiled by Vivian Wiser and issued in 1963, and Special List No. 28, *Cartographic Records of the Bureau of Agricultural Economics*, compiled by William J. Heynen and published in 1971. Post-1933 State and regional records are held by some of the National Archives regional archives.

**83.6** Record copies of publications of the Bureau of Agricultural Economics and one of its predecessors, the Bureau of Crop Estimates, are found in Record Group 287, Publications of the U.S. Government. Other related records are found in Record Group 16, Records of the Office of the Secretary of Agriculture, particularly in the general correspondence. Letters prepared by the Bureau and its predecessors for the signature of the Secretary have been microfilmed as part of National Archives Microfilm Publication M440, *Letters Sent by the Secretary of Agriculture, 1893-1929*, although only those for the Bureau of Statistics, Jan. 26, 1906-June 30, 1914 (Rolls 555-556), include pre-1913 materials. Information about work on marketing and farm management begun in the Bureau of Plant Industry can be found in the general correspondence of the Bureau of Plant Industry in Record Group 54, Records of the Bureau of Plant Industry, Soils, and Agricultural Engineering. Records relating to demonstration work begun in the Office of Farm Management and continued in the Extension Service are in Record Group 33, Records of the Federal Extension Service, while records relating to land utilization work are in Record Group 114, Records of the Soil Conservation Service.

**83.7 Editorial Note**: The records discussed in this chapter are those of the central office of the Bureau of Agricultural Economics, which was located in Washington, DC. Some records of State and regional offices of the Bureau are held by various National Archives regional archives. Like the bulk of the central office records, the field office records originated after 1912 and are not described here. Unless otherwise noted, series consisting of records that originated prior to 1913 but extending beyond that date are described in their entirety; no attempt has been made to determine what part of such series relates to the pre-1913 period. Most cartographic and photographic records are maintained apart from the textual records and are described at the end of the chapter. The photographic records are identified by alphabetic collection designators instead of by series titles; the designators are shown in parentheses.

## GENERAL RECORDS

### Records of the Bureau of Markets and Crop Estimates and Its Predecessors

#### Correspondence and Office Files

**83.8 Numerical general correspondence, 1912-22** (118 ft.), consists of incoming and outgoing letters, minutes of meetings, copies of speeches, and reports reflecting the centralization of the marketing activities of the Department in the Office of Markets, the Bureau of Markets, and the Bureau of Markets and Crop Estimates. Some records, dated as early as

1909, were accumulated by Charles J. Brand before he became the first Chief of the Office of Markets; these relate to work that was transferred to the Office of Markets. The records constituting this correspondence series are arranged by the number assigned to each correspondent, subject, and organizational unit. A list of subjects and Government agencies represented in this series and the number under which the relevant records are filed is provided in Preliminary Inventory No. 104. Access to the general correspondence is facilitated by two indexes compiled on 3- by 5-inch cards. Entries in the **name index, May 1913-Jan. 1922** (27 ft.), give the name of the correspondent, the date and subject of the correspondence, and the name or file number under which the correspondence is filed. Entries in the **subject index, May 1913-Jan. 1922** (15 ft.), provide the subject and date of the correspondence, the name of the correspondent, and the name or file number under which the correspondence is filed. Entries are arranged alphabetically by subject and thereunder chronologically. The series description in PI 104 (entry 3) includes a select list of subjects.

**83.9** Correspondence, speeches, bulletins, and newspaper clippings make up the **office files of J.C. Skinner, 1912-19** (10 in.), a Specialist in Cooperative Marketing. The files relate to Skinner's coordination of the work of State marketing agents who acted as a clearinghouse for marketing information, organized cooperatives, and assisted in drought relief work. Much of the personal material predates Skinner's employment in the Bureau and pertains to his interest in the *Fruit and Produce Marketer*, the *Fruit and Produce Distributor*, the Hood River Apple Growers Union, and the Northwestern Fruit Exchange.

Records Relating to Studies, Projects, and Surveys

**83.10** Two projects begun in the Bureau of Plant Industry are documented by the **records relating to "cooperative cotton handling and marketing and paper plant investigations," 1906-13** (2 ft.). The purpose of the cotton handling project was to study the ginning, handling, grading, baling, and marketing of cotton; to improve these processes by the use of demonstrations; and to publicize the results of the work done. In the course of this work, departmental employees traveled extensively, consulting with State and government officials, representatives of farmers' organizations, and persons connected with the cotton industry. Sites visited included Yuma, AZ, Little Rock, AR, Imperial, CA, New Orleans, LA, St. Louis, MO, Shawnee, OK, and Waco, TX. The paper plant investigations were conducted in cooperation with the Bureaus of Plant Industry and Chemistry to develop new sources of paper-making materials to replace wood pulp. The records consist of reports, correspondence, and questionnaires, arranged alphabetically by name of correspondent. Included are completed questionnaires titled "Estimated Consumption of Cotton of Various Lengths in an Average Year" for 1912 that were submitted by manufacturers located in California, Colorado, Iowa, Kansas, Louisiana, and several other States.

## Records of the Bureau of Agricultural Economics

Records Relating to Studies, Projects, and Surveys

**83.11** Project statements, work progress reports, and related correspondence concerning research and other activities of the Bureau or its predecessors constitute this series of **project files, 1907-39** (1 ft.). The records, most of which pertain to projects initiated after 1912, are arranged by project number except for a few unnumbered projects. The few early projects are listed below:

9. Cotton Marketing Demonstrations
10. Cotton Handling Investigations
23. Investigation and Demonstration of Cotton Standards
24. Cotton Testing
26. State Cooperation in Marketing Work

Records of Divisions Responsible for Agricultural Estimates

**83.12** The first appropriation for the collection of agricultural statistics was included in the 1839 act that provided $1,000 for the Patent Office for statistics gathering and other agricultural purposes. Of this amount, $126.40 was spent for collecting statistics. Between 1841 and 1845 annual estimates were made for about a dozen crops. The reports released by the Patent Office, however, were so inadequate that in 1853 the decision was made to discontinue the reports on agricultural statistics. Ten years later a division was created within the recently established Department of Agriculture to gather statistics. In 1866 reg-

ular monthly reports were begun on the condition of crops, and annual reports were begun on the acreage, yield, and production of important crops and on the numbers of livestock. By 1872 some farmers were using the statistics as a determining factor in withholding their crops from market. Publication of the *Crop Reporter*, considered the official source of crop information, began in 1900, superseding a series of crop circulars.

**83.13** In 1903 the Division of Statistics was merged with the Division of Foreign Markets, which had been organized as the Section of Foreign Markets in 1894, to form the Bureau of Statistics; the Chief of the Bureau was responsible for making periodic crop reports. In 1905 information relating to the cotton crop report was released prematurely, and as an aftermath of this, the procedure for making crop reports was changed. A Crop Reporting Board was established, and measures were prescribed to prevent the further premature release of information. Until 1922 the Chairman of the Crop Reporting Board was usually the Chief of the Bureau.

**83.14** Mimeographed or processed copies of **crop reports, 1897-1927** (16 vols., 3 ft.), released by the Department relate to speculative and nonspeculative crops as well as to special surveys. These reports are the official summaries of information relating to the acreage, yield, condition, amount in storage, shipments, and disposition of various field and vegetable crops, and the number, value, and disposition of livestock. The number of States covered by the reports varies according to the crop, but information is routinely provided for both "Oklahoma" and Indian Territory prior to Oklahoma's admission to the Union. No entries have been found for Arizona and New Mexico Territories. The reports are in scrapbooks.

**83.15** Narrative and statistical reports sent in by field or State representatives documenting and supplementing statistical data submitted in connection with the periodic crop reports constitute the **"Comments" on General Crop Reports, 1907-49** (132 ft.). Arranged chronologically by date of report and thereunder geographically by State, these reports provide an insight into agricultural conditions in rural areas at a given time. **"Comments" on cotton reports, 1911-44** (16 ft.), consist of narrative reports submitted by the State representatives to supplement and explain the statistical data submitted for crop reports. Arranged chronologically and thereunder by State, the reports provide data for Arkansas, Louisiana, Missouri, Oklahoma, and Texas.

**83.16** Copies of forms and instructions sent by the Washington office to individual reporters and field and State representatives for their guidance and use in submitting information concerning the statistical material required for the reports make up a series called **schedules, 1886-1940** (40 vols., 10 ft.). The documents are in oversize volumes with paper bindings.

**83.17** Summarized statistics submitted to the Department on acreage to be planted; acreage planted; condition of crops; yield, quality, grade, and disposition of crops; crop damage; and the like are recorded on **district and State summary sheets for general and field crop reports, 1910-37** (7 ft.). Records are arranged under three main headings (General Crops, Grain and Hay, and Legumes), thereunder by subject, thereunder chronologically. A list of relevant subjects and dates covered by the summaries follows:

General Crops:
General crop report, district and State summaries, 1910-23

Grain and Hay:
Monthly receipts of grain and hay, State totals and district summaries, 1907-26, 1935-36
Wheat by varieties, summary sheets, 1909-12, 1917, 1919-21, 1923-26
Winter wheat yield, quality, and grade; summary sheets, 1910-11, 1914

All States appear to be represented in the General crop summaries.

**83.18 Statistical records relating to livestock reports, 1910-36** (5 ft.), consist of listing sheets, summary sheets, balance sheets, and other record or tabulation sheets summarizing the data submitted for various reports on livestock. The records give information on the livestock on farms: number, changes, disposition, mortality and condition, breeding, and value of income, losses, and marketing. The records are arranged according to the report to which they relate. Only two of these reports provide pre-1913 statistics: Mortality and condition of livestock, State summaries, 1910-25; and Special survey, stocks of hogs, summary sheets, 1911.

Records of the Division of Farm Management and Costs and Its Predecessors

**83.19** The early work relating to farm management was begun in the Office of the Agrostologist,

Bureau of Plant Industry, in connection with grass and forage investigations. Surveys were started in 1902 to obtain information on how the best farms were managed and how such farms were affected by surrounding conditions. Three years later, the Bureau established a separate Office of Farm Management, which made surveys of farms, conducted demonstration work, and organized meetings and institutes for farmers. In 1915 the Office was transferred from the Bureau of Plant Industry to the Office of the Secretary where it was reorganized in 1919, to handle work in agricultural insurance, credit, and sociology that had been performed by the Bureau of Markets. To reflect its expanded functions, the Office was renamed the Office of Farm Management and Farm Economics. The Office was made a separate unit in 1920, but it lost its independent status in 1922 when it was merged with the Bureau of Markets and Cost Estimates to become the Bureau of Agricultural Economics. Its functions were divided among the Divisions of Farm Management, Cost of Production, Agricultural Finance, Farm Population and Rural Life, and Statistical and Historical Research. On July 1, 1924, the Division of Farm Management was combined with the Division of Cost of Production, to form the Division of Farm Management and Costs.

**83.20** The major series of divisional records consists of **reports, speeches, and articles relating to farm management, 1902-20** (33 ft.), that were produced by predecessor units of the Division of Farm Management and Costs. These records relate specifically to the work in cost of production, farm business, farm organization, demonstration, farm labor, land tenure, agricultural insurance, farming conditions in various sections of the country, and the varied interests of the members of the staff. Although the bulk of the material appears to have been unpublished, it is evident that some documents were issued by the Government Printing Office for the Department of Agriculture, and others were printed in occupational journals, such as *The Progressive Farmer*.

**83.21** Among the records are weekly, monthly, and annual reports of staff members; plans for individual farms; special studies; speeches made before agricultural groups; and reports and publications received from foreign sources. The records relate to, among other matters, weed eradication, dryland farming, fertilizers, farm equipment, farm structures, types of farming, genetics, land clearing, farm labor, rural credit, agricultural insurance, farm tenancy, land values, the cost of producing crops and livestock, the application of bookkeeping to farming, the use of statistics in studies made by the Office, and farm organizations, such as the county farm bureaus, the National Board of Farm Organizations, and the Federation of Jewish Farmers of America.

**83.22** The records are arranged alphabetically by name of author or agency or by subject. Special List No. 17, *Writings Relevant to Farm Management in the Records of the Bureau of Agricultural Economics*, enumerates the manuscripts by author or source and indexes them by State and foreign country and serves as the basis for the supplement which follows this chapter. The entries in the supplement are listed by author; the following list identifies the authors writing on matters relating to each State or Territory:

**Arizona**: Cotton, J.S.; Oakley, R.A.; Tracy, S.M.; Wooton, E.O.

**Arkansas**: Brodie, D.A.; McClelland, C.K.; McNair, A.D.

**California**: Cotton, J.S.; Chubbuck, L.; Moorhouse, L.A.; Quinn, C.E.; Shinn, C.H.; Tracy, S.M.

**Colorado**: Cotton, J.S.; Ewing, C.R.; Iddings, E.J.; Moorhouse, L.A.; Newcomb, D.E.; Oakley, R.A.; Quinn, C.E.; Working, D.W.

**Idaho**: Cotton, J.S.; Fluharty, L.W.; Hunter, B.; Moorhouse, L.A.

**Iowa**: Cotton, J.S.; Ellis, L.W.; McClure, H.B.; McCulloch, M.E.; Morris, E.L.; Oakley, R.A.; Peck, F.W.; Smith, A.G.; Smith, C.B.; Thomson, E.H.; Turner, H.A.; Warburton, C.W.; Warren, J.A.

**Kansas**: Cotton, J.S.; McClure, H.B.; Oakley, R.A.; Warburton, C.W.; Warren, J.A.

**Louisiana**: McClelland, C.K.; McNair, A.D.; Quinn, C.E.; Smith, A.G.

**Minnesota**: Clark, H.H.; Kadonsky, J.F.; McDowell, J.C.; Russell, H.L.; Smith, A.G.; Thompson, H.; Warburton, C.W.

**Missouri**: Cotton, J.S.; Doane, D.H.; McClure, H.B.; McNair, A.D.; Magruder, D.G.; Morris, E.L.; Smith, C.B.; Spillman, W.J.; Warburton, C.W.

**Montana**: Cotton, J.S.; Gilbertson, H.W.; Oakley, R.A.

**Nebraska**: Cotton, J.S.; Morris, E.L.; Mowry, H.H.; Warburton, C.W.; Warren, J.A.

**Nevada**: Cotton, J.S.; Oakley, R.A.

**New Mexico**: Cotton, J.S.; Heringa, E.; Oakley, R.A.; Quinn, C.E.; Wooton, E.O.

**North Dakota**: Cotton, J.S.; Doane, D.H.; Donaghue, R.C.; McDowell, J.C.; Smith, C.B.; Warburton, C.W.

**Oklahoma**: Hoke, C.E.; Quinn, C.E.; Youngblood, B.

**Oregon**: Cotton, J.S.; Hunter, B.; Spillman, W.J.; Thompson, H.

**South Dakota**: Cole, J.S.; Cotton, J.S.; Doane, D.H.; McDowell, J.C.; Morris, E.L.; Warburton, C.W.; Warren, J.A.

**Texas**: Ellis, L.W.; Hoke, C.E.; Offutt, M.M.; Quinn, C.E.; Smith, A.G.; Spillman, W.J.; Tracy, S.M.; Warburton, C.W.; Youngblood, B.

**Utah**: Cotton, J.S.; Moorhouse, L.A.

**Washington**: Billings, G.A.; Cotton, J.S.; Hunter, B.; Kaufman, W.H.; Sparks, H.W.; Spillman, W.J.; Thompson, H.

**Wyoming**: Cotton, J.S.

**83.23 Project files, 1906-21** (1 ft.), are broken down into three chronological segments (1906-11, 1912-19, and 1919-21); files in the first two segments are arranged numerically by project number, while those in the third segment are arranged alphabetically by subject. The files contain project statements, progress reports, statements on funds allocated and spent, and accompanying maps and photographs. The projects relate to vegetation and its use, the use of cactus, weed control, cropping systems, geographical conditions, land economics, farm management and practices, the cost of production, farm equipment, farm labor, rural life, demonstration work, agricultural insurance, and studies of the history of domestic and foreign agriculture. Pre-1913 projects include studies conducted in New Mexico and Texas on varieties and rate of growth of prickly pear, and investigations undertaken on the Santa Rita Reserve in Arizona, and at Chico, CA, and San Antonio, TX, into the varieties and uses of cactuses. A number of project files concern range studies conducted under the following titles: Behavior of Protected Range; Study of Range Feeds; Carrying Capacity of the Range; Reseeding the Range; Systems of Range Management; and Extent of Range Lands. Weed control studies relate to Johnson grass, nut grass, wild onion, quackgrass, sheep sorrel, Canada thistle, and weeds in pastures, meadows, and fields of small grains. Some early projects also concern general topics, such as farm economics, the cost of starting new farms, farm fences, and space units for buildings. Other States mentioned in the files are Colorado, Iowa, Minnesota, Missouri, North Dakota, South Dakota, Utah, and Wyoming.

**83.24 Records relating to farm business surveys, 1909-26** (30 ft.), consist of statistical information on individual farms, tabulatory and statistical records dealing with raw material, and copies of articles written in connection with farm business studies. The records include information on the location and size of farms; capital invested; receipts, expenses, and depreciation; farm income; labor income; net earnings; and crops planted, sold, or used. These records are samples that were retained when most of the records concerning the surveys were authorized for disposal by Congress; they are arranged alphabetically by name of State, with Iowa the only trans-Mississippi State represented in the series.

**83.25** Another series of samples is **records of farm labor surveys, 1909-22** (10 ft.), arranged alphabetically by name of farm owner. In this series also, Iowa represents the trans-Mississippi States. Composed of statements of receipts and expenses, monthly statements of labor workers' daily time sheets, ledgers, inventories, and other statistical records, this series contains considerable material (ca. 3 ft.) about the Fred McCullock farm near Hartwick, IA, including oversize farm plans, showing location of fields, feed lots, pastures, fences, and buildings.

**83.26** Fragmentary records relating primarily to projects conducted in cooperation with State agencies constitute **staff correspondence, 1910-36** (5 ft.), which is arranged alphabetically by name of staff member and thereunder by subject or name of correspondent. The records concern the cost of produc-

tion, farm business, farm labor, types of farming, farm organizations, range use and improvement, regional agricultural adjustment, and land and water utilization. The earliest records, 1910-19, are filed under the name "Ball, J.L."; the employee's name was actually James S. Ball.

## CARTOGRAPHIC RECORDS

**83.27** The cartographic records of the Bureau consist of 4,322 items, including maps, atlases, and graphs. Most of these materials are described in some detail in Special List No. 28, *Cartographic Records of the Bureau of Agricultural Economics*. The descriptions given below are abstracted from the entries in the Special List and are presented in the order in which they appear in that publication, with entries arranged by organizational units. Within each unit most entries are arranged geographically: those maps covering broad areas, such as the entire United States, are listed before maps covering smaller regions, and State maps precede county maps. Where this arrangement is not appropriate, entries are grouped chronologically or according to similarity of subject matter. Maps that cannot be identified with a specific section of a division and a few maps concerning the activities of the Bureau as a whole are included under "General Records."

### RECORDS OF THE OFFICE OF FARM MANAGEMENT AND FARM ECONOMICS

#### General Records

**83.28** Of the maps filed in this category four series are pertinent to this guide.

1. **Published land classification quadrangle maps of the Seattle and Takoma, WA, areas, showing extent of forested land, 1897** (2 items). These maps are U.S. Geological Survey quadrangles based on surveys of 1894-95 and published in 1897.

2. **Manuscript maps of the United States compiled from studies of truck farming in 1898, ca. 1900** (27 items). Each crop is represented by a separate map; a few of the maps may be incomplete. The maps are annotated to show acreage devoted to the crop in those States and counties in which the crop was grown commercially. Some of the maps also show amounts produced, and the last two refer to the industry as a whole. The maps are arranged in the original file order as follows: dry beans, cranberries, onions, cauliflower, green beans, green peas, muskmelon, tomatoes, lettuce, asparagus, eggplant, kale, parsnips, rhubarb, radishes, celery, cucumbers, sweet corn, cabbage, spinach, squash, potatoes, Irish potatoes, truck crop and canning industry, and grass area used by growers.

3. **Maps compiled by W.J. Spillman relating to grass and forage plant investigations, ca. 1905** (25 items). These manuscript maps, among the earliest to make use of the dot method of cartographic representation, include a map showing distribution of cattle in the western range country; a series of maps showing localities reporting significant productions of bunch grass, carpet grass, crabgrass, crimson clover, crowfoot, grain and cow peas cut for hay, Kentucky bluegrass, meadow fescue, millet hay, red clover, red top, and sorghum, kafir, and maize. A series of maps based on the 1900 census shows acreage distribution of corn, cotton, hemp, hops, kafir corn, oats, peanuts, and peas. Spillman was Chief of the Office of Farm Management. Some of his writings are listed in the supplement (item 40).

4. **Unidentified manuscript maps relating to hay investigations, ca. 1908** (4 items). These consist of three base maps of the United States marked "Hay - McClure," with numerous counties and parts of counties colored in red, orange, or green and one duplicate map, all without explanation. Harry B. McClure was a specialist in charge of hay investigations in various parts of the country for the Office of Farm Management in the years 1907-14. Some of his reports are listed in the supplement (item 21).

#### Division of Agricultural History and Geography

**83.29** Most of the cartographic records of the Office of Farm Management and Farm Economics were created in its Division of Agricultural History and Geography. The duties of the Division consisted of compiling historical and geographical data to create a better understanding of the nation's agricultural problems. In 1913 the Division began preparing the *Atlas of American Agriculture*, which was published in sections commencing in 1918. Although the atlas was originally planned to include information on types of farms, farm labor, crop patterns, land utilization, and rural populations, in its final published form issued in 1936, its scope was narrowed to the presentation of physical conditions affecting agricul-

ture. Selected maps prepared by the Division are listed below:

1. **Published map of the United States showing irrigated areas in the Western States, 1915** (1 item). This map was compiled from 1910 census data, revised by the Irrigation Division of the Office of Experiment Stations in 1914, and reduced and drafted in 1915.

2. **Maps relating to climate, 1915-18** (27 items). Prepared for the *Atlas of American Agriculture*, these maps include large-scale base maps of the United States, annotated according to Weather Bureau records to show average annual, seasonal, and monthly precipitation for the 1895-1914 period.

3. **An article entitled "Rural Population," 1919** (1 item). This article, with maps and tables, was published as an advance section of the *Atlas of American Agriculture*, although it was not included in the final version of the atlas. Some of the maps show by county the distribution of rural, village, and urban population in the United States in 1910. Others show information on rural population, including changes in distribution from 1900 to 1910, its relationship to the total population, Negro and white distribution, ethnic distribution (by country of origin of the foreign-born or those of foreign parentage), education and literacy levels, and the proportion unable to speak English. Tables give the 1900 and 1910 population for each State and county.

4. **Manuscript map of the United States showing the distribution of tenant farmers in 1880, 1918** (1 item). Information on this map is conveyed by dots plotted on a county outline base map.

5. **Manuscript maps of the United States showing the historical distribution of rural population, 1790-1830 and 1900-1920, 1914-21** (12 items). Information is shown decennially by dots plotted on county outline base maps. Included are some preliminary sheets.

6. **Maps of the United States showing historical density of population, n.d.** (2 items). Small-scale, photoprocessed maps show historical density of population per square mile. One item is a map of the United States in 1790; the other is a panel of eight maps showing the United States decennially from 1850 to 1920.

7. **Maps of the United States showing the distribution of farms in 1860 by farm size, n.d.** (7 items). These manuscript dot maps are on tracing cloth, with a separate map covering each of the following farm sizes by acres: 3-9, 10-19, 20-49, 50-99, 100-499, 500-999, and 1,000 and over.

8. **Manuscript maps of the United States showing the historical distribution of farms, 1860-1920, 1921** (7 items). These maps were revised in 1926. The corrected information is shown decennially by dots plotted on county outline base maps.

9. Acreage is shown decennially by dots plotted on county outline base maps that make up the series of **manuscript maps of the United States showing the historical distribution of land in farms, 1850-1910, 1916** (7 items), and **manuscript maps of the United States showing the historical distribution of improved land, 1850-1910, 1921** (7 items).

10. **Maps of the United States showing the historical distribution of crops and livestock from 1839 to 1919, ca. 1912-23** (217 items). These manuscript dot maps were originally intended for inclusion in the *Atlas of American Agriculture* but were not published in the final reduced version. The maps were based on the decennial censuses of agriculture, the first of which was taken in 1839. The information is plotted on county outline base maps, with a separate map for each crop and animal for each decade. In some cases worksheets and preliminary copies of maps duplicate information or provide slightly differing versions. The maps are arranged in two categories--crops and livestock--and thereunder by decade. Distributions are shown in units of production, such as bushels or tons, for the following crops: alfalfa (1889), apples (1889 to 1909), barley, corn, cotton, flaxseed, grapes, hay, hops, oats, peaches and nectarines (1889 to 1909), peas and beans (with separate information for peanuts, Canada peas, and cow peas), potatoes, rice, rye, sweet potatoes, tobacco, and wheat (with 1869 maps showing spring and winter). Livestock covered includes cattle, hogs, horses, mules, asses, burros (separate 1909 maps show yearlings and animals of working age), oxen, and sheep.

11. **Maps of the United States showing the historical distribution of dairy products from 1839 to 1919, 1914-23** (33 items). These maps, similar to the manuscript dot maps described in the preceding entry (10), are arranged chronologically under each type of product as follows: value of all dairy products, 1839 and 1899-1919; butter production, 1849-59, 1899, 1900, 1909-19; cheese production, 1849-1919; and milk sold from farms, 1869-79 and 1899-1919.

12. **Maps of the United States compiled from the 1910 census showing acreages of selected crops,**

**n.d.** (60 items). This series consists of separate photoprocessed maps for each crop, arranged alphabetically by name of crop. Information is shown by a dot in each county proportionate in size to crop acreage or production. Crops covered are apples (by distribution of trees), asparagus, bees (by distribution of colonies), berries (blackberries, dewberries, loganberries, raspberries, and strawberries), broomcorn, cabbages, cantaloupes and muskmelons, castor beans, cauliflowers, celery, clover hay, cucumbers, eggs (by dozens produced), green beans, green peas, green peppers, hemp, hops, lemons, lettuce, oats, olives, onions, oranges, peaches and nectarines, peanuts, potatoes, rye, sorghum cane, sweet potatoes, timothy hay, tobacco, watermelons, and wheat (includes acreage in Canada, and separate maps for spring and winter wheat).

13. **Manuscript maps of the United States showing wool production in 1900 and 1909, 1916** (2 items). Information is shown by dots plotted on county outline base maps.

RECORDS OF THE CENTRAL OFFICE OF THE BUREAU OF AGRICULTURAL ECONOMICS

**83.30** Most of these materials postdate 1912, but a few items relevant to this guide are described below:

General Records

1. **Base maps showing political subdivisions, 1920-40** (368 items). These manuscript, photoprocessed, and published versions of maps were originally used by the Department for compiling census and other agricultural data. About 300 of the items are maps of the United States, showing State and county boundaries in 1900, 1931, and 1940, and maps of the individual States and groups of States in the United States, showing counties and in many cases the boundaries of minor civil divisions as they existed in various years.

2. **Manuscript maps showing average precipitation in the United States, ca. 1941** (3 items.). Based on Weather Bureau data from 1899 to 1938, these maps were published in the 1941 *Yearbook of Agriculture*. Two maps show average annual and warm season precipitation by isolines, and the third map shows average annual precipitation and the boundaries of major drainage basins in the country by lines and colors.

Division of Farm Population and Rural Life

3. **Maps of States showing changes in population, ca. 1941** (3 items). The only relevant item included in this series is a map of Kansas showing changes in county population in the decades 1890-1900 and 1930-40.

4. **Maps showing historical interstate migration, 1870-1930, ca. 1940** (41 items). This series consists of two groups of photoprocessed panels of maps tracing the historical migration of population into or out of selected States according to census returns. Each panel relates to a single State and consists of seven maps of the United States covering the seven census years from 1870 to 1930. Each map in the first group of panels (in-migration) shows the number and distribution, according to State of birth, of persons born elsewhere but living in the State at the time of the census; included in this group are maps for Arizona, California, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Texas, Utah, and Washington. Each map in the second group of panels (out-migration) shows the number and distribution, according to new State of residence, of persons who were born in the State but who were residing elsewhere; the States represented in this group include Arizona, California, Idaho, Kansas, Louisiana, Minnesota, Nebraska, Nevada, New Mexico, Oregon, Texas, Utah, and Washington. For both groups of maps the numbers of migrants are shown by circles of various sizes. In addition, each of the panels contains a capsule history showing the flow of population into or out of the State during the time period.

Division of Statistical and Historical Research

5. **Manuscript map of the United States showing planting dates for spring wheat, ca. 1925** (1 item). This map is based on 3,000 reports from township correspondents of the Bureau of Crop Estimates. An inset map shows spring wheat acreage in 1909.

6. **Records relating to climatic studies, ca. 1931** (2 items). The records consist of a published panel of two maps of North Dakota comparing the distribution of precipitation to average wheat yields and a published panel of two graphs showing historical climatic conditions in the Harney Basin, OR, and at Havre, MT, as indicated by the annual growth of tree rings from 1730-1930.

Division of Land Economics

General Records

7. **Maps of Montana, New Mexico, Oregon, Utah, and Wyoming annotated to show irrigated lands, n.d.** (5 items). The maps are dated from 1908 to 1930, but annotations are not dated. Irrigated areas are shown in considerable detail on base maps prepared by the General Land Office and the U.S. Geological Survey.

Land Utilization Section: General Records

8. **Miscellaneous maps showing forest areas and cleared land, 1899-1942** (6 items). Included is an undated map showing woodlands in Indian Territory (Oklahoma) copied from a published map accompanying the 21st Annual Report of the U.S. Geological Survey in 1899.

9. **Geological and miscellaneous reference maps published by State agencies, 1876-1940** (67 items). These State and county maps show geological and geomorphic features, soils, forest types, and miscellaneous land use information. Included are maps for Arkansas, California, Colorado, Kansas, Minnesota, Montana, Nevada, North Dakota, Oklahoma, South Dakota, Washington, and Wyoming, but the only pre-1913 item is the North Dakota map, which relates to soils (1909).

Land Utilization Section: Records of Oliver E. Baker

10. **Photoprocessed dot maps of the United States showing areas increasing and decreasing in number of farms, 1910-20 and 1930-35** (4 items).

11. **Maps of the United States relating to farm tenancy and ownership, 1936** (16 items). Photoprocessed dot maps show the distribution of farms operated by tenants, sharecroppers, full owners, and part owners and the area changes in each category, 1910-20, 1920-30, and 1930-35. A small-scale map of the United States shows by State and by region the number of tenant farmers as a percentage of all farmers decennially from 1880-1935.

Land Utilization Section: Records of Francis J. Marschner

12. **Maps relating to studies of railroad land grants and land use in the Western States, ca. 1920-27** (15 items). These maps include four undated large-scale maps of parts of Montana, showing lands granted to the Northern Pacific Railway and related historical data, with each section and township annotated with unidentified numbers and symbols that apparently relate to resource use. Other items in this series include a 1904 map of Oregon showing land grants to the Northern Pacific Railroad, the Dalles Military Road, the Oregon Central Military Road, the Oregon and California Railroad, and others, annotated to show land use in some western and central counties and indexed with the locations of approximately 900 communities; a chart published by the Oregon Short Line Railroad showing historical variations in the level of the Great Salt Lake and monthly precipitation in the basin from 1850 to 1915; two undated maps of northern Arizona showing landholdings of the lessees and purchasers of land of the Santa Fe Pacific Railroad Company, the St. Louis and San Francisco Railway Company, and the Aztec Land and Cattle Company and also showing forest lands, Indian lands, and sheep driveways. Also included is a separate description of an Arizona-New Mexico map, now lost, that showed the use of public lands.

13. **Maps showing physiographic and land use areas in the south central United States, ca. 1941** (9 items). Included are maps of Oklahoma showing physiographic regions (1912), soil areas (n.d.), and forest types (1940).

14. **Maps showing the seasonal use of grazing lands in the western range, 1905 and 1947** (3 items). The 1905 item, a large-scale, published, color map of the Western States, compiled by Albert F. Potter of the Bureau of Forestry and annotated and used by Marschner as source material, gives information about grazing lands either dependent on tank water and snow or developed by wells and windmills.

15. **Records relating to wetlands and drainage, 1914-45** (10 items). Included in this series is a map showing drainage surveys conducted in 1907-8 by the U.S. Geological Survey of lands ceded by the Chippewa Indians in northern Minnesota, which is annotated to show "peat" and "openings." A published version of the map accompanies the report "Drainage Survey of Certain Lands in Minnesota" (H. Doc. 27, 61st Cong., 1st sess., Serial 5579).

Water Utilization Section

16. **Manuscript and photoprocessed maps relating to water facilities plans in the Western**

**States, 1937-43** (75 items). Included are materials for Arizona, California, Colorado, Montana, Nebraska, Nevada, New Mexico, North Dakota, Texas, Washington, and Wyoming. The only items that are clearly identified as providing pre-1913 data concern the Mosca Irrigation District (Alamosa, Rio Grande, Conejos, and Saguache Counties) in Colorado. The maps show the rate of precipitation at Garnett (1891-1942) and Manassa (1906-42).

RECORDS OF THE REGIONAL OFFICES OF THE BUREAU OF AGRICULTURAL ECONOMICS

Berkeley Office (Region 7)

General Records

**17. Graphs compiled for a comparative study of agricultural and economic conditions in California, other Western States, and the United States as a whole, ca. 1944** (10 items). The graphs are numbered from 1 to 10. Graph 1 shows population growth from 1900 to 1944 and forecasted trends from 1945 to 1960 in California, 10 Western States, and the United States; graph 8 shows cash farm income in California, 1910-43, by types of crops and livestock.

Division of Land Economics: General Records

**18. Graph showing comparative growths of population and crop acreages in the United States, 1880-1960, ca. 1940** (1 item).

**19. Panel of maps showing the historical development of counties in California, n.d.** (1 item). Included on the panel are eight manuscript maps giving data on county formations from 1850 to 1922. The information was adapted from a 1923 report of the California Historical Survey Commission.

**20. Manuscript maps relating to land utilization studies of Santa Cruz County, California, 1936-41** (29 items). Among these maps are items showing maximum rainfall, 1889-90, and mean annual rainfall, 1911-37. The maps were prepared chiefly by the California unit of the Land-Use Planning Section of the Resettlement Administration.

GENERAL PHOTOGRAPHIC RECORDS

**83.31** The photographic records consist of 26,600 images covering the period 1896 to 1947. Among the records are photographs from the Office of Farm Management and Farm Economics, 1896-1922 (**F, FA, FB, FC**), taken as part of studies of agricultural methods in the United States, showing land features; types of crops; cultivating, harvesting, and marketing of crops; farm animals; farmsteads and ranches; farm machinery and equipment; irrigation and conservation methods; and farmers and their families. Also from the Office of Farm Management and Farm Economics are glass negatives showing the care and breeding of livestock, 1900-22 (**L**).

**83.32** Photographic prints, 1902-38 (**ML**), illustrate the efforts of the Bureau of Agricultural Economics to study and promote standardization of agricultural products and to improve the processing and marketing of products. Included are pictures of agricultural products, marketing cooperatives, marketing methods, rural homes and industries, transportation facilities, and people engaged in processing and marketing agricultural products. Photographs taken by the Bureau's various predecessors document efficient farming and marketing techniques throughout the United States, 1911-47 (**G**), showing the harvesting and cultivation of many different crops; the raising of cattle, sheep, and other livestock; rural and urban markets; farm homes; rural hospitals, schools, and libraries; topographical views of forests, pastures, and abandoned and settled lands; and new and old models of farm machinery.

## SUPPLEMENT

### Selected Reports, Speeches, and Articles Relating to Farm Management, 1902-13

This supplement is based on Vivian Wiser's *Writings Relevant to Farm Management in the Records of the Bureau of Agricultural Economics* (Special List No. 17).

1. **Billings, G.A.**
   Suggested Farm Plans for Specific Farms in Washington and Other States. 1901-15. 35 items. (includes a plan for a dairy farm in western Washington)
   Monthly Reports, 1912. 8 items.

2. **Brodie, D.A.**
   Report of Trip to Arkansas. 1909. 7 pp.

3. **Chubbuck, Levi**
   Agricultural Survey of Riverside County, California. 1911. 6 pp.
   Report of Trip Into Southern California. 1910. 14 pp.
   Farm Management Problem of the Western District. 1911. 2 pp.
   Indian Boarding Schools and Agricultural Education. 1911. 5 pp.
   Annual Reports, 1911-13. 3 items.
   Monthly Reports, 1911-16. 35 items.

4. **Clark, H.H.**
   Clearing Land on the Northeast Experiment Farm of the University of Minnesota, 1908-10. 13 pp.
   Monthly reports, 1912-15. 19 items.

5. **Cole, J.S.**
   Agricultural Survey of Tripp County, South Dakota. 1908. 8 pp. (accompanied by a map of the county, showing Indian allotments, school lands, town sites, homestead entries, and Soldiers' Declaratories)

6. **Cotton, J.S.**
   Stock Industry in Merced County. 1904. 7 pp. (CA)
   Cattle Feeding in the Central Western States. 1907. 19 pp.
   Report on the Fifth Annual Convention of Colorado Cattle and Horse Growers' Convention. 1905. 5 pp.
   Data on the Production of Beef in the Corn Belt. 1911. 9 pp.
   Cattle Feeding, Cass County, Iowa. 1906. 6 pp.
   Stock Raising, Marion County, Iowa. 1906. 3 pp.
   Report on Cattle Feeding in Kansas. 1910. 14 pp. (pp. 1-8)
   Visit to the Newhall Land and Farm Company's Ranch Near Saugus. 1905. 2 pp. (CA)
   Agricultural Conditions in Fergus County, Montana. 1909. 16 pp.

Report of Range Conditions in Western Nebraska. 1906. 8 pp.
Range Investigations in Western Dakotas and Eastern Montana. 1906. 13 pp.
Reseeding Mountain Meadows. n.d. 12 pp. (CA, WA)
Report on the Agricultural Conditions in Lyman County, South Dakota. 1908. 4 pp.
Report on the Agricultural Conditions in Stanley County, South Dakota. 1908. 10 pp.
Cost of Preparing Tracts for Irrigation in Yuma Project, Yuma, Arizona. n.d. 4 pp.
Dairying at Fresno. n.d. 2 pp. (CA)
Agricultural Conditions of Inyo County, California. n.d. 4 pp.
Cattle Disease in Long Valley. 1905. 4 pp. (CA)
Agricultural Condition of Kern River Valley. n.d. 12 pp. (CA)
Report on Corporation Ranch, Modoc County, California. 1908. 4 pp.
Agricultural Possibilities of Modoc County, California. 1906. 4 pp.
Reports on Reseeding Experiments in the Northern Half of Warner Mountains, California. 1906-8. 3 items.
Report on Reseeding Investigations, Sierra National Forest (North), California. 1909. 7 pp.
Notes on Tulare County, California. n.d. 8 pp.
Agricultural Conditions at Fort Collins, Colorado. 1905. 9 pp.
Agricultural Conditions at Greeley, Colorado. n.d. 7 pp.
A System of Farm Management as Carried on by W.H. Baker, Grundy County, Missouri. 1909. 11 pp.
Report on Agricultural Conditions at Norfolk, Nebraska. n.d. 6 pp.
Cost of Preparing Land Under Carson-Truckee Project, Fallon, Nevada. n.d. 4 pp.
Report on Farm of W.H. Whillrodt, Brule County, South Dakota. 1908. 6 pp.
Report on Butte County, South Dakota. 1908. 6 pp.
Semi-Annual Report of Work Done on Cooperative Range Experiment Station, Rattlesnake Mountains, Washington. 1902. 17 pp.
Second Annual Report of the Cooperative Range Work, Washington. 1902. 17 pp.
Report of Work Done on Range Experiment Stations for the Period Ending July 31, 1903. 15 pp.
Third Annual Report of the Cooperative Range Work, Washington. 1903. 46 pp.
Report of Work Done on Wenatchee Mountain Station. 1904. 13 pp. (WA)
Report of Work Done in the State of Washington. 1905. 8 pp.
Reports on Wenatchee Mountain Station, 1905 and 1906. 3 items. (WA)
Report on Cooke and Bull Cattle Range. 1905-6. 10 pp. (WA)
Introduction of Livestock into Washington State. 1904. 6 pp.
Cost of Starting a New Twenty-Acre Irrigation Farm in the Yakima Valley, Washington. n.d. 5 pp.
Land Leasing System Used by Northern Pacific Railway in Washington State. n.d. 5 pp.
List of Plants Collected in Sierra Forest Reserve. 1905. 2 pp. (CA)
Report on Visit to Cheyenne, Wyoming. 1905. 6 pp.
Report on Grazing Conditions in the Northern District of the Sierra Forest Reserve. n.d. 26 pp. (CA)
A Report on Long Valley Range. n.d. 2 pp. (CA)
Grazing Conditions in Semi-Arid Regions. 1909. 12 pp.
Improvement of Mountain Grazing Areas. 1912. 67 pp.
Notes on Nevada. n.d. 8 pp.

Nevada Range Investigations. 1905. 4 pp.
Opinions Gleaned in 1906 from Stock Men as to the Best Disposition of the Public Range. 1915. 53 pp. (AZ, CA, CO, ID, KS, MT, NB, NM, ND, OR, SD, UT, WA, WY)
Range Management. n.d. 2 items.

7. **Doane, D.H.**
A Report on the Farm Management of Feeding Sheep. ca. 1909. 129 pp.
Outline of J.L. Terrell's Farm Operations, 1907-8. 24 pp. (MO)
Plans for Farms--Indiana and Missouri. 1909. 3 items.
Report of Mr. James E. Starr's Work in Sheep Feeding, 1906-8. 12 pp. (MO)
Report of Weather and Crop Conditions in Missouri for 1911. 3 pp.
An Agricultural Survey in the Semi-Arid Regions of the Dakotas. 1909. 621 pp.
Address Given at Farm Management Seminar, December 7, 1911. 34 pp.
Cooperative and Demonstrative Farms in Missouri. 1911. 2 pp.
Farm Management Work in Missouri. 1909. 8 pp.
Investigation Work on County Fairs in Missouri. 1909. 3 pp.
Feeding Lambs on the Farm of T.B. Atkins. n.d. 3 pp. (MO)
The Missouri Farm Management Association. 1910. 4 pp.
Missouri Farm Management Demonstration Meetings. 1911. 5 pp.
Missouri Farm Management. 1910-11. 8 items.
Annual Reports, 1909-11. 3 items.
Monthly Reports, 1910-12. 22 items.
Weekly Reports, 1906. 5 items.

8. **Donaghue, R.C.**
Report of the Farm Management Work in North Dakota. 1911. 15 pp.

9. **Ellis, L.W.**
Traction Plowing in the United States. 1909. 116 pp.
Traction Plowing [Interview with C.W. Hart of Hart Parr Co., Charles City, IA]. 1909. 12 pp.
Use of Traction Engines in Farming. 1911. 16 pp.
Visit to Farm of H.G. Hays [Hereford, Deaf Smith County, TX]. 1908. 4 pp.
Report, 1907-8. 4 pp.

10. **Ewing, C.R.**
Farming in the San Louis Valley. 1911. 7 pp. (CO)

11. **Fluharty, Lee W.**
Bean Growing in Northern Idaho. 1911. 13 pp.
Annual Reports, 1911-13. 2 items.
Monthly Reports, 1912. 4 items.

12. **Gilbertson, H.W.**
Agricultural Conditions in Montana. 1912. 178 pp.
Alfalfa Culture in Montana. 1912. 4 pp.

Blue Joint [culture in Montana]. 1912. 10 pp.
Montana. 1912. 29 pp.
Brief Report of Agricultural Conditions and Problems in Montana. 1911. 4 pp.
Sheep Industry in Montana. n.d. 7 pp.

**13. Heringa, E.**
A Brief Agricultural Survey of New Mexico. 1907. 62 pp.
Report on Farming Conditions in Colfax County, New Mexico. 1906. 11 pp.
Report on the Agricultural Conditions in Otero County. 1906. 7 pp. (NM)
Report on Agricultural Conditions in Roosevelt County, New Mexico. 1906. 13 pp.
Report on the Agricultural Conditions in Union and Quay Counties. 1906. 11 pp. (NM)
Report on Farming Conditions in Colfax County, New Mexico. 1906. 13 pp.
Report on Agricultural Conditions in Otero County, New Mexico. 1906. 9 pp.
Report on Agricultural Conditions in the Mesilla Valley, Dona Ana County, New Mexico. 1906. 13 pp.
Report on Agricultural Conditions in the Lower Membres Valley, Luna County, New Mexico. 1906. 6 pp.
Report on Agricultural Conditions in the Pecos Valley, New Mexico. 1907. 14 pp.
Report on Agricultural Conditions in the Rio Grande Valley. 1906. 7 pp. (NM)
Report on Agricultural Conditions in the Estancia Valley. 1906. 11 pp. (NM)
Report on Agricultural Conditions in San Juan County. 1906. 16 pp. (NM)
Report on Agricultural Conditions at Las Vegas. 1906. 14 pp. (NM)
Report on Agricultural Conditions in the Chama and Espanola Valleys. 1906. 4 pp. (NM)

**14. Hoke, Charles E.**
Alfalfa Seed Crop in Oklahoma. 1912. 9 pp.
Farm Management Investigations in Oklahoma. 1912. 1 p.
Farmers Buy Their Own Cream. 1912. 9 pp. (OK)
Report Upon Legumes and Other Crops Grown in Texas in the Season of 1911. 21 pp.
Alfalfa Investigations. 1909. 16 pp. (OK)
Corn Breeding. 1910. 5 pp. (OK)
Cotton Growing in Oklahoma. 1911. 9 pp.
Production of Alfalfa Hay. 1912. 25 pp. (OK)
Work Schedule for 20 Acres of Cotton in Central Oklahoma. 1912. 4 pp.
Outline of Plans for Farm Management Work in Oklahoma for the Year Beginning July 1, 1911. 6 pp.
Pork Production in the Southwest. 1912. 11 pp.
A Story of Kafir. 1912. 3 pp.
A Successful Irrigation Farm. 1911. 8 pp.
Texas Rice Culture. 1909. 8 pp.
Oklahoma--Agricultural Surveys [by county]. 1907-10. 3 folders.
Texas--Agricultural Conditions Near Alvin and Hitchcock. 1909. 10 pp.
Agricultural Conditions in the Vicinity of Bay City, Brownsville, Kingsville, and Mercedes. 1909. 16 pp. (TX)
Orange Culture. 1909. 5 pp. (TX)
Data and Notes on Hog Fence. 1908. 3 pp. (OK)

Annual Reports, 1911-13, 1917. 4 items.
Monthly Reports, 1910-15. 49 items.

**15. Hunter, Byron**
Agricultural Surveys of Washington and Oregon. 1903-6. 9 folders.
Study of Field Crops. 1906. 8 pp. (WA)
Report on Clark's Right Lap Cutaway. 1906. 10 pp. (WA)
Farm Practice With Forage Crops in Oregon and Washington West of the Cascade Mountains. 1906. 45 pp.
Western Washington Forage Plants. 1905. 15 pp.
Farm Management Problems in the Pacific Northwest. 1911. 12 pp.
Hog Houses. 1911. 3 pp.
Give Corn a "Square Deal" and Better Crops Will Result. n.d. 4 pp.
Dry Farming in the Columbia River Basin. n.d. 10 pp.
160-Acre Diversified Farm, Lookout, Idaho. 1909. 5 pp.
Clover Seed Production in the Willamette Valley, Oregon. n.d. 18 pp.
Corn Notes. 1904. 2 pp. (OR)
Seeding Timber Burns and Burnt Slashings. 1908. 2 pp. (OR, WA)
The Silo in Western Washington and Western Oregon. n.d. 4 pp.
Wheat Culture in the Columbia Basin. 1906. 31 pp.
Plan for a Dairy, Hog, and Grain Farm for Eastern Oregon, Eastern Washington, and Northern Idaho. n.d. 8 pp.
Plan for the 320-Acre Farm of H.H. Curtis [Pullman, WA]. 1909. 14 pp.
Dairy farm Owned by W.J. Langdon [Sumner, WA]. 1912. 10 pp.
Diversified Farms, Washington. 1909. 3 items.
Clover Seed and Hog Production in the Willamette Valley. 1908. 7 pp. (OR)
Forage Crops for Hogs in the Willamette Valley. 1908. 7 pp. (OR)
Study of the Gravelly Prairies of Western Washington. 1912. 27 pp.
Willamette Valley Forage Plants. 1905. 33 pp. (OR)
Annual reports, 1906, 1909, 1911-13. 4 items.
Monthly Reports, 1907, 1912. 7 items.

**16. Hunter, B., and C.L. Smith**
Farm Management Problems in the Pacific Northwest. 1911. 12 pp.

**17. Iddings, E.J.**
Memo Concerning General Work of the "Office." 1907. 4 pp.
Report on Investigations of Colorado Farming Conditions. 1906. 4 pp.
Arkansas Valley. 1906. 12 pp. (CO)
Fort Collins District, Larimer County. 1908. 6 pp. (CO)
Fremont and Garfield Counties. 1906. 6 pp. (CO)
Grand Valley, Mesa County. 1906. 5 pp. (CO)
Logan and Morgan Counties. 1906. 5 pp. (CO)
North Fork and Uncompaghre Valleys. 1906. 8 pp. (CO)
Phillips County. 1906. 4 pp. (CO)

Rocky Ford, Otero County. 1906. 2 pp. (CO)
San Luis Valley, Chaffee County. 1906. 11 pp. (CO)
Weld County. 1906. 5 pp. (CO)

**18. Kadonsky, J.F.**
Methods and Cost of Clearing Cut-Over Lands in Northern Wisconsin and Northeastern Minnesota. 1910. 18 pp.

**19. Kaufman, W.H.**
Farm Management in Whatcom County, Washington. 1911. 9 pp.

**20. McClelland, C.K.**
Agricultural Surveys of Arkansas and Louisiana. 1906-8. 18 items. (includes reports on Hamburg, Murfreesboro, and Camden in Arkansas, and Ruston and Roseland in Louisiana)

**21. McClure, H.B.**
Notes on Pleasanton, Kansas. 1907. 3 pp.
Miscellaneous Notes on Work in [several States, including grass reports for Iowa and Missouri]. 1906-9. 12 items.
Annual Reports, 1912-13. 2 items.
Monthly Reports, 1912. 6 pp.

**22. McCulloch, M.E.**
[Map of the Principal Soil Areas of Iowa. 1905].
[Crop] Maps. 1911. 10 items.
Glacial Soils of Iowa and Their Relation to Present Day Problems of Farm Management in Iowa. 1910. 17 pp.
Agricultural Survey of Iowa, 1909-10. 18 pp.
Notes and Reports on Agricultural Survey of Iowa. 1909-10. 36 items. (includes reports for the following counties: Appanoose, Clarke, Davis, Decatur, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Lucas, Mahaska, Marion, Monroe, Muscatine, Scott, Van Buren, Wapello, Warren, Washington, and Wayne)

**23. McDowell, J.C., and others**
Agricultural Surveys of Michigan, Minnesota, North Dakota. 1908-9. 25 items. (includes maps for Minnesota and reports for the following counties in North Dakota: Billings; Burleigh; Cass; Dunn; Emmons; McHenry; Stark [including a county history]; Stutsman; Ward; Wells; and Williams [2 items about farming on the Williston Project])
Agricultural Survey of Western North Dakota and Central South Dakota. 1909. 46 pp.
Agricultural Surveys of South Dakota and Wisconsin. 1908-12. 38 items.
Agricultural Surveys of South Dakota and Wisconsin. 1908-12. 38 items. (includes reports on agriculture in the vicinity of Pierre, SD, and in Brown, Hand, Hughes, and Hyde counties)
Annual Report, 1909. 5 pp.
Annual Reports and Summaries, 1909-15. 10 items.
Monthly Reports, 1911-12, 1915-16. 20 items.

**24. McNair, A.D.**
Hay and Pasture. 1908. 10 pp. (AR, LA)
Report of Investigations Made in Illinois, Kentucky, Missouri, and Tennessee. 1908. 7 pp.
Farm of Arthur L. Smith [Sterlington, Ouachita Parish, LA] 1908. 7 pp.
Louisiana Lespedeza Growers Association. 1911. 5 pp.
Lespedeza Investigations. 1909. 5 pp.
The Clovers for Ouachita Parish. 1910. 4 pp. (LA)
Arkansas: Report for Year Ending June 30, 1908. 15 pp.
Arkansas Labor Schedules for 20 Acres of Cotton. 1912. 5 pp.
Arkansas--Labor Reports. 1912. 19 pp.
Arkansas--Labor Schedule for One Man-Two Horse Farm. 1912. 6 pp.
Labor Records From Eight Arkansas Farms. 1912-13. 31 pp.
Surveys of Farms in Arkansas. 1908-12. 16 items. (covers farms in Benton, Independence, Lonoke, Pulaski, Randolph, and Washington counties)
List of Farmers in Arkansas Who Grow Lespedeza. 1912. 4 pp.
Notes on Alfalfa, Red Clover, and Lespedeza. 1908, 1911. 2 items.
Annual Reports, 1908-17. 9 items.
Monthly Reports, 1910-17. 53 items.

**25. Magruder, D.G.**
Milk Feeding of Broilers in Missouri. 1911. 5 pp.
A Diversified Ozark Farm. 1911. 12 pp.
Farm Management in the Ozarks and Southeastern Missouri. 1911. 115 pp.
An Ozark Creek Bottom Farm. 1911. 12 pp.
Preliminary Report on the Agriculture of Lincoln County, Missouri. 1912. 59 pp.
A Profitable Ozark Hill Farm. 1911. 11 pp.
A Successful Farm in Southeastern Missouri. 1912. 2 pp.
A Typical Ozark Farm. 1911. 16 pp.
A Type of the Ozark Farm. 1911. 7 pp.
A Profitable Family Dairy. 1911. 7 pp.
The Proper Use of the Straw Stack. 1912. 10 pp. (MO)
Systems of Farming in the Ozarks. 1912. 67 pp.
Tobacco Farm Management in Missouri. 1912. 7 pp.
Monthly Reports, 1911-12. 21 items.
Annual Reports, 1910-13. 3 items.

**26. Moorhouse, L.A.**
Some Phases of Agriculture in the Arkansas Valley. 1912. 5 pp.
Beets in Oxnard, California. 1912. 2 pp.
Farm Practice in the Beet Sugar Districts of California. 1912. 22 pp.
Farm Management in the Sugar Beet Districts of Colorado. 1911. 37 pp.
Farm Practice in the Irrigated Districts of Northern Colorado. 1912. 46 pp.
Farm Management in Colorado. 1912. 12 pp.
Farm Management in the Utah and Idaho Beet Sugar District. 1912. 10 pp.
Monthly Reports, 1912. 3 items.

Report, July 1-Dec. 15, 1910. 13 pp.

**27. Morris, E.L.**
Preliminary Investigations on Wild Hay. 1903. 11 pp. (IA, NE, MO, SD)
Recommendations for Experiments. 1902. 3 pp. (IA)
Journal of Field Work. 1902. 32 pp. (IA)

**28. Mowry, H.H.**
Cooperation in Nebraska Farm Equipment Investigations. 1912. 1 p.
Annual Reports, 1911-13. 3 items.
Monthly Reports, 1911-14. 27 items.

**29. Newcomb, D.E.E.**
Notes on San Luis Valley, Colorado. 1911. 4 pp.

**30. Oakley, R.A.**
San Luis Valley. 1905. 18 pp. (CO)
Cooperation Work From Colorado East to Maryland. 1903. 8 pp.
[Native Grasses] Report of Field Work From May to October 1904. 23 pp. (AZ, IA, MT, NV)
Notes on Native Hay and Grasses. 1904. 10 pp. (AZ, CO, KS, MT, NV, NM)
Notes on Grain Hay in Arizona. 1904. 10 pp.
Domestication of Native Grasses. 1908. 3 pp.

**31. Offutt, M.M.**
Observations and Conclusions Upon East Texas. n.d. 15 pp.
Agricultural Surveys of Texas. 1908-9. 30 items. (covers 31 counties)

**32. Peck, F.W.**
Cost of Producing Beef, Pork, and Mutton on a Number of Farms in Iowa [1909-11]. 1913. 167 pp.

**33. Quinn, C.E.**
Alfalfa as a Forage Crop for Hogs. 1906. 4 pp. Chilocco Indian Agricultural School, OK)
Agricultural Survey, California and Colorado. 1908. 13 pp.
Agricultural Conditions in Louisiana. 1908. 10 pp.
Agricultural Conditions in Texas and New Mexico. 1908. 3 pp.
Weekly Reports and Itineraries, 1906-7. 21 items.
Miscellaneous letters. 1906-7. (KS, OK)

**34. Russell, H.L.**
[Procedures for] Stump Removal in Wisconsin and Minnesota. 1910. 3 pp.

**35. Sherman, Caroline B.**
History of the Bureau of Markets. 1920. 11 pp.

**36. Shinn, C.H.**
Agricultural Survey, California. 1903-7. 7 items.

**37. Smith, A.G.**
Report of Drainage Investigations, Indiana, Illinois, Iowa, and Minnesota. 1912. 14 pp.
Report of Drainage Investigations, Texas and Louisiana. 1912. 12 pp.
Annual Reports, 1910-11, 1913, 1915-16. 8 items.
Monthly Reports, 1909, 1912-13. 12 items.

**38. Smith, C.B.**
Report of Trip to Missouri, Iowa, North Dakota, Wisconsin, and Michigan. 1911. 12 pp.
Report of Trip to North Dakota, Iowa, and Michigan. 1911. 7 99.
Plans for Farms. 1908-11. 10 items. (in vicinity of Barney, Madison Count, IA)
Relation of Agricultural Extension Agencies to Farm Practices. 1913. 26 pp.

**39. Sparks, H.W.**
Report of Investigations of Methods of Clearing Logged-Off Lands in Western Washington. 1911. 36 pp.

**40. Spillman, W.J.**
Cooperative Work Carried on in Texas. 1907. 7 pp.
Farm Labor Question, 1907-8. n.d. 7 pp.
A Greeting to the Oregon Farmer. n.d. 3 pp.
Growing Alfalfa in the Mississippi Valley. 1907. 3 pp.
The Layout of the Farm. 1906. 9 pp.
The Marketing of Farm Products. 1907. 4 pp.
Memorandum Regarding the Organization and Work of the Office of Farm Management. n.d. 12 pp.
The Missouri Farmer and His Opportunities. 1906. 8 pp.
Organization of National and State Forces in the Advancement of Agriculture. 1912. 6 pp.
Organization of the Farm for Profit. 1911. 7 pp.
Some Present Agricultural Problems. 1910. 9 pp.
Standards of Farm Labor. 1911. 19 pp.
Successful Farm Management. 1906. 10 pp. (KS, MO)
Successful Poultry and Dairy Farm. 1909. 61 pp. (H.L. Blanchard, Jefferson County, Washington)
Types of Farming in the United States. 1908. 16 pp.
Types of Farming and Their Possibilities. 1907. 9 pp.
Valuable Bulletin on Forage Crops. 1906. 4 pp. (OR, WA)
What is Farm Management? n.d. 78 pp.
What is Farm Management? 1911. 5 pp.

**41. Thompson, Harry**
Clearing Land in Washington. Weekly Reports, July-Aug. 1908. 5 items.
Cost of Clearing Land for Agriculture in Washington. 1910. 114 pp.

Preliminary Report on the Cost of Clearing Logged-Off Land in the Pacific Northwest. 1909. 19 pp.
Letters concerning the clearing of land in Washington. 1908-9. 5 items.
Investigations of the Methods and Cost of Clearing Land for Agriculture in the State of Washington. 1910. 115 pp.
Report Upon the Logged-Off Lands in Minnesota, Wisconsin, and Michigan. 1912. 16 pp.
Cost and Methods of Clearing Land in Western Washington. 1911. 79 pp.
Weekly Reports, 1908. 8 items.
Monthly Report, July 1908. 1 p.

**42. Thomson, E.H.**
Report on Farm Survey Work. 1911. 11 pp. (IA)
Organization of the Section of Farm Economics. 1912. 11 pp.
Supplementary Data on Dairy Farms and on Iowa Farms. 1909-10. 2 items.

**43. Tracy, S.M.**
Forage Plants of the Gulf Coast. n.d. 30 pp.
Arizona and California. Farm Practice and Production of Crops. 1905. 11 pp.
Agricultural Survey of Texas. 1906. 6 pp.
Annual Reports, 1911-12. 2 items.
Monthly Report, Jan. 1912. 1 p.

**44. Turner, Howard A.**
Farm Management Survey of 1911 in Iowa and Illinois. 1913. 19 pp.

**45. Warburton, C.W.**
Agricultural Surveys of Virginia, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Texas. 1904-6. 24 items. (Texas materials include reports on Austin, Dallas, Eastland, Houston, Nueces, and Starr counties, and on diversification farms in 1906 at Arlington, Athens, Bellville, Boerne, Columbus, Corpus Christi, Crockett, Dallas, Eastland, Groesbeck, Lockhart, Sherman, and Temple)
Corn Substitutes for the Southwest. 1906. 5 pp.
Onion Growing in the Southwest. 1905. 2 pp.
Forage Crops at Terrell, Texas. 1905. 6 pp.
Weekly Reports, 1904-6. 61 items.

**46. Warren, J.A.**
Effect of Clover and Alfalfa on Crops Following. 1909. 3 pp. (IA, KS, NE)
Additional Notes on the Number and Distribution of Native Legumes in Nebraska and Kansas. 1910. 9 pp.
Agriculture in the Central Part of the Semi-Arid Portion of the Great Plains. 1910. 77 pp.
Some Yields of Grain and Potatoes on the High Plains. 1909. 4 pp.
Report for Nebraska and Northwestern Kansas on Agricultural Conditions. 1906. 4 pp.
Suggestions to Settlers on the North Platte Irrigation project. 1909. 8 pp.
Agricultural Survey of Tripp County, South Dakota. 1910. 15 pp.

Reports for 1906. 11 items.
Report for July 1908. 13 pp.

**47. Wooton, E.O.**
Special Report on Range Investigations in the Santa Rita Range Reserve. 1912. 7 pp. (AZ)
A Proposal to Establish a Range Reserve in Southern New Mexico. 1912. 9 pp.
The Stock Raising Industry in the Western United States. 1912. 21 pp.
Annual Reports, 1911-13. 2 items.

**48. Working, D.W.**
A Study of a Small Retail Dairy. 1912. 6 pp. (Paper read before the Colorado Dairymen's Association)
Farming in the San Luis Valley in Colorado: A Preliminary Study. 1911. 11 pp.
Agricultural Development of the San Luis Valley, Colorado. 1911. 19 pp.
San Luis Valley Notes. 1912. 3 items. (CO)
Sweet Clover as a Farm Crop in the San Luis Valley of Colorado. 1911. 1 p.
Farm-Management Work, June-December 1911. 5 pp.
Agricultural Lands and Values in Mesa County, Colorado. 1911. 1 p.
Montezuma Valley Notes. 1912. 2 pp. (CO)
A Preliminary Study of the Making of a Colorado Dairy Farmer and His Farm. 1911. 9 pp.
Annual Report, 1912. 16 pp.
Monthly Reports, 1912. 7 items.

**49. Youngblood, Bonney**
Outline of Work in Farm Management District No. 4. 1908. 9 pp. (OK, TX)
Plan of Work To Be Done in Farm Management in District No. 15. 1910. 2 pp. (KS, OK, TX)
Plan of Work to Be Done in District No. 15 for Year 1911. 11 pp. (OK, TX)
Farm Management Investigations in District 15. 1910. 5 items.
Agricultural Surveys of Oklahoma and Texas. 1908-11. 17 items. (Chiefly Texas. Includes information regarding fairs in Oklahoma and in Dallas, TX; surveys of the following counties and/or areas in Texas: Brewster, Ector, Hill, Jeff Davis, the Milano country, Nueces County and the Brownsville country, Pecos, Reeves, San Saba, Ward, and Wood; and an account of a cross-country trip to the Panhandle of Texas.)
Agricultural Statistics for Certain Black Land Counties in Texas for the Years 1849, 1859, 1869, 1879, 1889, and 1899. 1910. 1 p. (covers the following counties: Collin, Cooke, Dallas, Denton, Ellis, Fannin, Grayson, Hunt, Johnson, Kaufmann, Lamar, Milam, San Saba, Tarrant, Travis, and Williamson)
Semi-Arid Farming on the Plains. 1908. 5 pp.
Soy Beans. 1910. 7 pp. (TX)
Notes Upon Leguminous Crop Work for 1910 in Texas. 26 pp.
A Profitable Diversification Farm. 1908. 16 pp. (OK)
A Farm Management Survey of Semi-Arid Portions of Texas. 1909. 24 pp.
Study of Farm Practices in Western Texas. 1908. 8 pp.
Extracts From Soil Survey Reports Relating to the Houston Series of Soils in Texas and Oklahoma. 1910. 25 pp.

An Example of Mixed Crop and Stock Farming in Western Texas. 1908. 8 pp.
Annual Reports, 1909, 1911. 2 items.
Monthly Reports, 1907-11. 18 items.

# Record Group 88

## RECORDS OF THE FOOD AND DRUG ADMINISTRATION

*SAN FRANCISCO LABORATORY.--The work of the San Francisco Laboratory during the year has been of a different character than that of the preceding year in that the subject of oriental proprietary medicines has been under investigation. Of the imported samples, 36 per cent were oriental drugs, and 40 per cent of the oriental drug samples examined were found to be illegal. Twenty percent of the import samples examined were made up of tea, examined for coloring and facing....A number of analyses had been made of typical California fruits of varying degrees of ripeness to note their change in composition. During the latter part of the year the time of one man has been devoted to the analysis of fruits in connection with the experimental cannery established in San Francisco for the study of fruit-canning problems peculiar to California....A special investigation of all the breweries within the city of San Francisco was carried out to decide certain questions relative to what the brewers considered to be the proper raw materials with which beer should be made.*

*Report of the Acting Chemist,* Annual Reports of the Department of Agriculture, *1912, p. 584.*

### INTRODUCTION

**88.1** The Food and Drug Administration was designated by the Agricultural Appropriation Act of 1931 to continue the regulatory functions established under the Food and Drugs Act of 1906 that had been performed by the Bureau of Chemistry, the Board of Food and Drug Inspection, and the Food, Drug, and Insecticide Administration. The Food and Drug Administration and its functions--except those relating to the enforcement of the In-secticide Act of 1910 and the Naval Stores Act--were transferred in 1940 from the Department of Agriculture to the Federal Security Agency, which became the Department of Health, Education, and Welfare in 1953. The Administration enforces the Federal Food, Drug, and Cosmetic Act, the Tea Importation Act, the Import Milk Act, the Caustic Poison Act, the Hazardous Substances Labeling Act, and the Filled Milk Act, with responsibility for promoting purity, standard potency, and honest and informative labeling of consumer products covered by these acts.

**88.2** No comprehensive detailed descriptions of the records constituting this record group exist. Most of the records discussed in this chapter were created by the Bureau of Chemistry and subordinate units. Records documenting the nonregulatory functions of the Bureau of Chemistry are part of Record Group 97, Records of the Bureau of Agricultural and Industrial Chemistry. Record copies of publications of the Bureau of Chemistry are in Record Group 287, Publications of the U.S. Government. Records concerning chemical investigations of the Agricultural Division of the Patent Office and the general supervision of chemical work in the Department of Agriculture are in Record Group 16, Records of the Office of the Secretary of Agriculture, as are copies of letters prepared by the Bureau of Chemistry for the signature of the Secretary, 1906-29. The letters are reproduced as part of National Archives Microfilm Publication M440, *Letters Sent by the Secretary of Agriculture, 1893-1929* (rolls 244-271).

**88.3 Editorial Note**: Many records included in Record Group 88 originated after 1912, and they are not described here. Unless otherwise noted, series consisting of records that originated prior to 1913 but extending beyond that date are described in their entirety; no attempt has been made to determine what part of such series relates to the pre-1913 period. Most photographic records are filed apart from the textual records and are identified by alphabetic collection designators instead of series titles; the designators are shown in parentheses.

### RECORDS OF THE BUREAU OF CHEMISTRY

**88.4** Until 1927, analytical and regulatory work concerning purity standards for food and drugs as well as the enforcement of the act of June 30, 1906, originally called the Pure-Food Act but generally referred to for appropriation purposes as the Food and Drugs Act, were performed mainly by the staff of the Bureau of Chemistry. In 1906 food and drug inspec-

tion laboratories were already operating in New York, Boston, Philadelphia, Chicago, New Orleans, and San Francisco, where samples of imports taken at those ports of entry were examined. During the year following the passage of the Food and Drugs Act, 11 additional laboratories were established, including those at Denver, Galveston, Kansas City, Portland, St. Paul, and Seattle. By 1912 laboratories were also operating in Omaha and St. Louis. Officials of the Bureau inspected food and drugs, procured information regarding their manufacture and traffic, analyzed samples, conducted scientific investigations, and made recommendations. Until his resignation in 1912, the Bureau was headed by Dr. Harvey Washington Wiley, a leader in the crusade for pure food and drugs, who had been appointed Chief Chemist of the Department of Agriculture in 1883. A reorganization of July 1, 1927, transferred the Bureau's regulatory work to the newly established Food, Drug, and Insecticide Administration.

**88.5 "Special files," 1907-20** (25 ft.), the most substantive series of Bureau records, reflect the diversified activities of the Bureau. These files, consisting of reports, letters, and related materials relating chiefly to the enforcement of the Food and Drugs Act, constitute a set of 184 numbered dossiers, arranged numerically by dossier number. A complete list of the subjects covered by the dossiers is available for use at the National Archives. Those files most relevant to this guide are discussed below. Files 23, 27, and 135, which are particularly interesting, are listed even though the documents post-date 1912.

**1**. Tilson: Correspondence, 1909-15, with P.S. Tilson, in Houston, TX, who served as a collaborating chemist. He was initially appointed on August 29, 1908. Many of these documents concern his appointment and other personnel matters.

**3**. Sugar-Granulated-American Sugar Refining Co.: Includes a brochure produced by the Imperial Sugar Company, Sugar Land, TX, called "Interesting Sugar Facts," which reproduces letters, 1908-13, showing "How Competition in Sugar in Texas Benefits You."

**5**. Raw-materials, Colors, Dyes (1905-17): Includes correspondence with manufacturers and others located west of the Mississippi River.

**17**. Cream, Neutralizer, Centralizer, Liming: Includes a "Report of Cream and Creamery Investigation," produced for the Dairy Division, Bureau of Animal Industry, that contains information on sanitary conditions at creameries located in Kansas, Nebraska, and Oklahoma, during the period 1912-13.

**19**. Mixed Flour: Includes a copy of a 1907 revision of U.S. Internal Revenue Regulation No. 25, entitled "Regulations Concerning Mixed Flour under Internal Revenue Act Approved June 13, 1898, as Amended by Act of April 2, 1902."

**23**. Milk Reports, Central District Campaign of 1915: Includes a 1916 report on the milk supply of St. Louis, MO, which warrants mention because of its length and detail.

**27**. Mescal, Peyote, Pellote (1914-16): Includes documents about hallucinogen use by Indian tribes.

**85**. Use of Homogenized Butter and Skimmed Milk in Manufacture of Ice Cream (1911-18)

**109**. Dried Apples (1907)

**116**. Organization of Districts: Includes copies of bulletins produced in connection with the Thirteenth Census of the United States (1910), covering the population of cities, manufactures, and the number and distribution of inhabitants in the Nation.

**127**. Correspondence re the Bleached Flour Case: Letters and other documents, 1906-13, concern hearings, November 18-23, 1908, and related matters.

**135**. General Milk Conditions in Omaha (1915)

**150**. Tentative Food Inspection Decision (FID) on Opium (1911-12)

**157**. Old Correspondence re Cocaine (1907-13)

**168**. Old Correspondence From Dr. A.H. Bryan's Files on Sugar, Sugar Mfg., Machinery, Etc.: Includes copies of letters exchanged in 1887 between Gov. H.C. Warmoth and Dr. H.W. Wiley, Chief Chemist, and between Warmoth and other officials of the Department of Agriculture, regarding diffusion experiments at Magnolia Plantation at Lawrence, LA. Also included are letters regarding beet cultures, from the general manager of the feeding station of the Standard Cattle Company, Ames, NE, reporting beet crop yield by field for 1893 and 1894.

**169**. Metals in Foods: Contains a report submitted by Dr. J.F. Stevens, Lincoln, NE, entitled "Copper Sulphate Treatment of Typhoid Fever," 1905-6, with some letters from 1909.

**176**. Borax: Includes a 1902 booklet by Charles F. Dight, M.D., called "A Study of the Effect of Borax and Boric Acid on the Human Body, with Particular Reference to Their Use as Food Preservatives," which was published in Minneapolis, MN.

In addition to the file list already mentioned, access to the special files is aided by a **subject index** (1 ft.),

compiled on 3- by 5-inch cards, arranged alphabetically.

**88.6** St. Louis and the State of Missouri figure in three series of records concerning hearings and court cases described below:

1. Warwick M. Hough, of St. Louis, MO, is quoted extensively in transcripts found in records of **hearings dealing with the meaning of the term "Whiskey," 1906-9** (10 in.). Hough represented certain distillers and blenders at hearings held during April and May 1909, and the transcripts cover his testimony and other comments as well as those of John G. Parker, also of St. Louis, and Professor Edwin F. Ladd, the State chemist and food commissioner of North Dakota. Not found is a transcript of the comments of J.D. Rouse, on behalf of the Louisiana Distillery Company, who was interviewed after the hearings ended. Printed copies of the *Report of the Solicitor General to the President Upon Certain Questions Submitted to Him Concerning the Meaning of the Term "Whisky"* (1909), and of President William H. Taft's decision, *Pure Food Act: What Is the Meaning of the Term "Whisky" Under the Pure Food Act, and the Proper Regulations for Branding Various Kinds of Whisky Under the Internal Revenue Act?* (1909), are also included. A typescript copy of the Solicitor's report is found with the miscellaneous records discussed in 88.7.

2. Correspondence with the Monsanto Chemical Works, a company located in St. Louis, is found in **records relating to the labeling of acetphenetidin, 1906-14** (4 in.). These documents concern the question of whether acetphenetidin was a derivative of acetanilid, a substance used in the treatment of fever, headache, and rheumatism.

3. Correspondence and publications make up the **records relating to baking powder manufacture, 1900-1902** (3 in.). Included are copies of the Supreme Court decision of December 22, 1902, in the case of *Whitney Layton, Plaintiff in Error*, v. *The State of Missouri*, concerning products containing alum, and a stenographer's transcript of the Decision of Court in the case of *State of Missouri* v. *Great Western Tea and Coffee Company*, concerning the sale of baking powder containing alum. Also included is a copy of a Supreme Court decision of January 22, 1900, in the case of *Chew Hing Ling & Company, Petitioners,* v. *John H. Wise, Collector of Customs for the Port of San Francisco*, regarding the importation of tapioca.

**88.7** Press copies of letters sent by Dr. Wiley during part of his tenure as Chief of the Bureau are found in a series called **miscellaneous records, 1877-1910** (5 ft.), which appears to consist largely of materials from Wiley's office. The letters are bound in seven volumes covering the periods September 20, 1899, to April 4, 1901 (2 vols.), and February 15, 1904, to August 24, 1908 (5 vols.). Two of the volumes include indexes to addressees, some of whom lived in California, Kansas, Louisiana, Minnesota, Missouri, Montana, and Texas. Other items in this series are a bound volume of typewritten materials on the "Effect of Boric Acid on Health," consisting largely of copies or summaries of, and extracts from, official and scientific writings; a bibliography and a subject index, collected for Wiley's use in 1908, with some additions as late as 1910; a mimeographed transcript of the proceedings of a "Packers' Convention on Pure Food and Meat Inspection Law," held August 30-31, 1906, and attended by representatives of packing companies operating in California, Iowa, Kansas, Minnesota, and Nebraska; and copies of published articles and speeches by Dr. Wiley, 1877-1904.

**88.8** Also available are undated **subject and author indexes to publications and manuscripts of former Bureau of Chemistry staff members** (4 ft.), compiled on 3- by 5-inch cards.

## RECORDS OF THE BOARD OF FOOD AND DRUG INSPECTION

**88.9** This Board, created by the Secretary of Agriculture on April 25, 1907, to act on all questions arising from the enforcement of the Food and Drugs Act of 1906, handled correspondence involving interpretation of the act, conducted hearings based on alleged violations of the act, and prepared Food Inspection Decisions and Notices of Judgment. Analytical work required for the information of the Board was performed by the Bureau of Chemistry, whose Chief, the Chemist, served as chairperson of the Board. The other members of the Board were the Bureau's Associate Chemist and the Solicitor of the Department. The Board was abolished in 1914 and its functions divided between the Bureau of Chemistry and the Office of the Solicitor.

**88.10 Minutes of executive sessions, May 2, 1907-February 21, 1913** (5 in.), document the Board's consideration of hearings, Food Inspection

Decisions, and cases being prosecuted. The Board held sessions twice a week and at other times called by the Chairperson. The sessions are numbered, and the minutes arranged numerically by session numbers (1-290). Filed with the minutes is a folder labeled "miscellaneous," containing letters and memorandums addressed to or written by the Solicitor or the Chief of the Bureau, relating to the work and procedures of the Board. These documents constitute a series called **correspondence of the Chairman, 1908-10** (1 in.), though some of the documents in the file are dated 1907 and others 1911.

**88.11** Among the **records relating to inspection and seizure actions, 1908-12** (4 in.), are lists of cases reported to the Solicitor and transmitted by the Secretary of Agriculture to the Attorney General for action and lists of seizures made during a given period. Entries on the list reports, arranged numerically by case or seizure number, give the name of the product, the quantity seized, the consignor, the consignee, the charge, and the inspector's name. Typical of the list reports is a seizure report for the period June 15 to August 1, 1910, including entries for seizures of products containing boric acid. For example, seizure number S.581, covers consignments from a firm in Brooklyn, NY, totaling 23 crates of ice cream cones intended for consignees in Galveston, TX; S.583, covers dry egg albumen seized in St. Louis, MO. Also included in this series are related memorandums, letters, and other materials pertaining to seizures and condemnations of shipments of foods and drugs on grounds of adulteration or misbranding (mislabeling). An interesting memorandum dated October 13, 1910, concerns the misleading packaging of pasta products produced by a firm in San Francisco, CA, and shipped to Spokane, WA. Although the label included the California address of the manufacturer, the title of the product, "Pompei Macaroni Factory--Qualita Extra," and the pictorial representation on the label of an active volcano, a figure representing Liberty extending the flag of Italy, and medals of award conveyed the impression that the product was imported. A copy of the label is attached to the memorandum. The reports and related records are arranged in rough chronological order.

**88.12 Records relating to hearings, 1907-15** (20 ft.), document approximately 1,300 hearings held during the 1907-13 period. Arranged numerically by hearing numbers, these relatively brief transcripts of proceedings give the date of the hearing; the subject (product and related case number when relevant); and the names of the participants and the firms or offices that they represented. A complete list of the hearings, identifying the number, the date, the subject or firm and product involved, and any related case numbers, is available for use at the National Archives. Similar information is also found in an **index to hearings, 1907-13** (ca. 1 ft.), compiled on 3- by 5-inch cards. An adaptation of this list, Table - 88.12, follows this chapter. The table covers hearings associated in some fashion with States or Territories west of the Mississippi. These selected hearings are listed by hearing number, with each entry giving the date of the hearing, the subject or product, the State or Territory involved, and the number of the related case or Food Inspection Decision (F.I.D.), where applicable. The case files affiliated with the hearings have not been accessioned by the National Archives.

**88.13 Transcripts of hearings on bleached flour, 1908** (3 in.), document meetings the Secretary of Agriculture conducted in November 1908, at which officials of the flour milling industry and agricultural chemists testified for or against bleaching. Among those attending were chemists from Minnesota, Nebraska, and North Dakota, and representatives of millers located in Minnesota, Missouri, and elsewhere in the United States. Copied into the transcripts are letters from millers in Arkansas, Colorado, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Oklahoma, and Texas who favored bleaching.

**88.14** The Board was responsible for two sets of periodic publications. For the guidance of manufacturers and others interested in the food laws and subsequent rulings, the Board published a series of numbered documents called Food Inspection Decisions. While the decisions had no judicial force, they stated the Department's views and policy concerning the fraudulent labeling of food products, the use of certain harmful substances in the manufacture or processing of foods, and related matters. Signed original copies, printed copies, and drafts make up the bulk of the series of **Food Inspection Decisions, 1904-13** (1 ft.). Also included are some letters, memorandums, and reports analyzing data used to make and draft the decisions, as well as a file of draft decisions that were "never acted upon" and accompanying memorandums. The records are arranged numerically by F.I.D. number, with some gaps. Worthy of special mention is the considerable correspondence and related materials concerning an amendment to F.I.D. 134, "The Labeling of New Orleans Molasses," issued

April 25, 1911. Among these documents is a digest of definitions of "New Orleans Molasses" which was compiled in 1910 by conducting a survey of 202 manufacturers, jobbers, wholesale and retail dealers, and consumers.

**88.15** The Board also initiated the series of Notices of Judgment, which documented the findings in terminated cases, both those decided adversely and those decided favorably to the Government. These notices were prepared by the Solicitor's office and issued by the Board through 1909 and thereafter by the Office of the Secretary. Advance copies of the notices were forwarded to those State officials authorized to cooperate with the Department of Agriculture in the enforcement of the food and drug laws. The notices served to deter offenders from further violations of the law and to inform officials engaged in administering the food and drug laws as well as manufacturers and producers of foods and drugs of the interpretation placed by the Department and by the courts on the provisions of the law defining adulteration and misbranding. Signed original copies and drafts of the numbered notices constitute the **Notices of Judgment obtained by the Board of Food and Drug Inspection, 1908-10** (4 in.). The records are arranged numerically by notice number, 1-122, with some gaps; included are unnumbered copies of notices 129, 130, and 131. The notices of judgment associated in some fashion with States or Territories in the trans-Mississippi West that are included in this series are listed in Table - 88.15. A complete printed set of the notices is also available as a separate series (see 88.21).

**88.16 Reports submitted to the Board of Food and Drug Inspection, 1908-12** (4 ft.), are arranged alphabetically by subject and thereunder chronologically. The records consist of letters and memorandums exchanged between the Board and the Bureau of Chemistry, other Federal and State Government agencies, and private firms and individuals; opinions of the Solicitor of the Department of Agriculture; and summaries of reports and other documents compiled to determine whether certain imported food products met the standards established by the Food and Drugs Act of 1906. Most records are filed by name of fruit, vegetable, liquor, drug, or organization; interspersed, however, are files labeled Board, Congressional Bills, Cooperation (Com. State Off.), Court Decisions, Laws, Molasses--New Orleans, Precedents, and Standards. A few files meriting further discussion are listed below.

1. Board: These files contain correspondence of the Board, 1907-11, regarding hearings, the status of cases, and procedures.

2. Congressional Bills: This file contains printed copies of bills originating in the Senate and House of Representatives, 1910-13, that relate to food and drug issues.

3. Cooperation (Com. State Off.): This file relates to the work of the Committee on Cooperation with Commissioned State officials. Included is a typed copy of a transcript of sessions of a Conference Between State and National Food, Dairy, and Drug Officials, held in Washington, DC, November 14-15, 1913, and copies of earlier correspondence and related publications, with some items dating back to 1907. One of the documents is a list of the persons attending the 1913 conference.

4. Molasses--New Orleans: This relatively extensive file of documents, 1910-11, includes the completed questionnaires used in compiling the digest of definitions of New Orleans molasses in connection with F.I.D. 134, discussed in 88.14.

## RECORDS OF THE REFEREE BOARD OF CONSULTING SCIENTIFIC EXPERTS

**88.17** In 1908, to counteract a claim of some manufacturers that the investigations of the Board of Food and Drug Inspection were valueless, the Secretary of Agriculture, in response to President Theodore Roosevelt's request, established the Board of Referees as an independent, unbiased group of experts. The manufacturers had assured the President that they would discontinue the use of sulphur dioxide, saccharin, and benzoate of soda in food if a board of experts found those substances to be harmful. The Board consisted of five members selected by the President who were to report to the Secretary on the wholesome or deleterious character of foods and drugs. The referees served until June 30, 1915, when their appointments expired and the Board was discontinued.

**88.18** The Board was charged with determining the harmfulness of the use in foods of the following substances: benzoate of soda, saccharin, sulphate of copper, sulphur dioxide, and alum. In order to reach its conclusions the Board conducted independent original investigations. By June 30, 1912, the Board had completed its work on three substances. The work of the Board is documented is three series: **records**

**relating to the use of sulphur dioxide as a food preservative and the use of alum in certain foods, 1911-13** (4 in.); **food charts, 1909-12** (6 ft.), of various sizes up to approximately 2 feet square; and **reports, 1911-13** (20 ft.). Among the reports is an edited typescript, "The Drying of Fruit with Special Reference to the Use of Sulphur," ca. 1908, regarding the investigation of sulphuring fruit in California. The author of the report is referred to in accompanying documents as "Dr. Bigelow," probably W.D. Bigelow, who was chief of the Bureau of Chemistry's Division of Foods.

## SELECT RECORDS OF THE FOOD AND DRUG ADMINISTRATION AND ITS PREDECESSORS

### General Records

**88.19** In the appropriation bill for 1903, Congress authorized the Secretary of Agriculture to collaborate with the Association of Official Agricultural Chemists (AOAC) and other experts to establish standards of purity for foods. The work of developing the proper standards was delegated to the Bureau of Chemistry, and the results of the attendant investigations were submitted to the food standards committee of the Association for consideration and advice. The AOAC was composed of chemists connected with agricultural colleges, experiment stations, State and municipal boards of health, boards of agriculture, and similar organizations.

**88.20** Correspondence with members of the AOAC is distributed throughout the **correspondence and reports of Food Standards Committees, 1897-1938** (25 ft.), a series consisting of records that were created under the Bureau of Chemistry and thereafter augmented by committees of both the Food, Drug, and Insecticide Administration and the Food and Drug Administration. For the most part, the records are arranged by name of product and thereunder chronologically. Among the foods covered are meat products; dairy products, such as milk, cheese, butter, and ice cream; egg products; wheat and corn products; breads and other bakery items; fruit juices and other nonalcoholic beverages; sugar and related products; beers, ales, wines, and liquors; canned and dried fruits; jams and preserves; canned vegetables; cocoa products; sauces and spices; and flavoring extracts. The records include letters, memorandums, reports, transcripts of hearings, press releases, publications, statements of standards, and other materials documenting investigations into the manufacture of various foods and the development of standards. Some of the more interesting items are the following: a digest of work undertaken with the AOAC prior to 1914; a compilation of amendments to various food and drug acts and regulations for their enforcement, arranged by name of act; and a copy of Bureau of Chemistry Bulletin No. 72, published in 1903, which includes "A Monograph on the Manufacturers of Wines in California," by Henry Lachman, of San Francisco, CA.

**88.21** Printed Notices of Judgment were originally issued periodically in pamphlet form. Copies of the notices issued by the Bureau of Chemistry, the Food, Drug, and Insecticide Administration, and the Food and Drug Administration were compiled, arranged in numerical order, and either bound or put in binders to form a record set of **Notices of Judgment under the Food and Drugs Act, 1908-39** (31 vols., 14 binders, 4 ft.). Volumes 1 to 8 contain the notices (nos. 1-1832) covering the period May 2, 1908, to Dec. 17, 1912. The notices were issued after final determinations of cases brought to court under authority of section 4 of the Food and Drugs Act, and most of the notices display the related case numbers in the upper left corner of the title page. The notices concern both food and drug cases and give the details of the charges, an account of actions taken in the cases, and their disposition. Indexes to the notices are interspersed throughout the set. The first index, covering notices 1-1000, follows Notice of Judgment No. 1000; supplemental indexes were issued periodically thereafter, usually after every 50th notice. The major headings vary from index to index, but the entries generally are to products, manufacturers, and distributors.

**88.22 Reports and correspondence of the Beverage Branch and its predecessors, 1907-41** (25 ft.), concern investigations conducted by the Food and Drug Administration and its predecessors, of the manufacture of various juices and alcoholic beverages for compliance with Federal law. Arranged by name of beverage and thereunder chronologically, the records consist largely of reports, tabulations, and analysis forms. The early materials produced by the Bureau of Chemistry include an extensive manuscript report on alcoholic beverages composed of several parts filed in binders. The part titled "Champagne and Sparkling Wines" includes a discussion of port and

sherry wines produced in California and Missouri, while information on liqueurs produced or distributed in those States is provided in a part called "Cordials." Another part, "Cordials I: Brandy, Whiskey, Alcohol," reports on inspections of distilleries and plants in California, Arkansas, and Louisiana; "Cordials II" discusses companies in Louisiana.

**88.23** Newspaper clippings, carbon copies of articles, and other documents maintained for their historical content constitute the **records from the office of Fred B. Linton, 1898-1927** (1 ft.). Linton, who was the assistant to the Commissioner of the Food and Drug Administration until 1944, had also served as assistant to the Chief of the Bureau of Chemistry from 1921 to 1927. Included are materials relating to public agitation for pure food legislation and a scrapbook of clippings regarding enforcement of the Food and Drugs Act, compiled from newspapers published in 1909 in California, Iowa, Kansas, Louisiana, Minnesota, Missouri, Nebraska, Texas, Utah, and Washington. Also included are carbon copies of articles and addresses by C.A. Browne, who served as Chief of the Bureau of Chemistry. Among these is "A Sketch of Agricultural Chemistry in America from 1663 to 1863," which includes a discussion of the contributions of the American Indians.

### Fiscal Records

**88.24** The quantity of financial records is relatively small. Only the **miscellaneous budget papers, ca. 1910-30** (4 ft.), pre-date 1913.

### Indexes

**88.25** Numerous indexes and similar files were maintained to provide access to the records. Although most of these reference tools are arranged either alphabetically by subject or name, or numerically by case, seizure, or hearing number, two files are arranged geographically, one by name of State, the other by name of city. The State file is a segment of an extensive set of 5- by 8-inch **charge and status cards, 1907-38** (89 ft.), most of which are arranged in chronological segments. The cards constituting the State segment, 1909-10 (ca. 4 ft.), are arranged by State and thereunder by name of city and/or district. The entries identify the products and quantities involved, the pertinent seizure or case number, and the action taken. Included are cards for all of the States/Territories covered by this guide. Entries in the chronological segments are arranged numerically by I.S. (Interstate Shipment) numbers. The second file, **import detention notices, 1908-38** (91 ft.), also compiled on 5- by 8-inch cards, documents tests of imported food and drugs conducted by food inspection laboratories maintained by the Bureau of Chemistry and its successors. The notices are in two segments, each of which is arranged alphabetically by name of the port or other city where food inspection laboratories were located. Among the cities represented are Denver, Galveston, Kansas City, Los Angeles, New Orleans, Portland, St. Louis, St. Paul, San Francisco, and Seattle. The cards provide information on the port of entry, product tested, manufacturer, consignee, steamer transporting the product, result of test, and action taken. Some other relevant indexes are listed below:

1. **Cards relating to seizure recommendations, Group 1, 1907-14** (1 ft.), arranged by seizure numbers, 1-2137, summarize the facts included in the seizure recommendation, identifying the substance or product, consignors and consignees, and pertinent case numbers.
2. **Index to seized articles, 1908-39** (ca. 8 ft.), consists of slips arranged by name of product. Entries give seizure number, date of seizure, location, consignor, consignee, quantity, and condition.
3. **Manufacturer index, 1907-14** (ca. 1 ft.), consists of a mixture of cards and slips arranged alphabetically by the name of the manufacturer involved in the case.
4. **Index to criminal cases, manufacturer or shipper, 1909-40** (11 ft.), consists of 5- by 8-inch cards arranged alphabetically by name. Entries give the seizure number, product, location, violation, and status.
5. **Index to analytical and investigational data of food product samples, analytical food product sample cards, 1905-32** (10 ft.), consists of 5- by 8-inch cards arranged in several segments designated by alphabetic suffix, and thereunder by I.S. number. Entries identify the product, source, and results of testing.

### Photographic Records

**88.26** The separately-filed photographic records consist of 30,500 images covering the period 1885-1977. Photographs and lantern slides, 1885-1944 (4,000 images, **GP, GB, GS, GN**), document the

regulatory and analytical functions of the Food and Drug Administration and its predecessors. Shown are agency personnel engaged in the chemical analysis of drugs; investigations into the fraudulent labeling of drugs; inspections of milk, fish, and other food products; and seizures and destruction of contaminated foods. Also included are pictures depicting the manufacture of candy, liquor, and other commodities. Shelf lists are available for series GB and GS.

## RECORDS RELATING TO THE *UNITED STATES PHARMACOPOEIA*

**88.27** The standards adopted as official U.S. standards by the Food and Drugs Act of 1906 were those promulgated by the U.S. Pharmacopoeia Convention and published in the *United States Pharmacopoeia*. This publication, first issued in 1820 and revised periodically thereafter, contains lists of drugs, with descriptions, tests for identity, purity, and strength, and formulas for their preparation. For the period 1880 to 1950, the years covered by the records discussed below, the revised editions were issued every 10 years, and the records themselves are arranged chronologically in 10-year segments. The revisions were prepared by a Committee of Revision composed of 50 scientists interested in drugs, chemicals, and medicinal preparations. Most of the Committee's work was accomplished by subcommittees whose members were scattered throughout the country, making it necessary to conduct business by mail because frequent meetings were not feasible. The Committee for the ninth revision (1910-20) included members residing in Kansas, Missouri, and Texas.

**88.28** The records relating to the *United States Pharmacopoeia*, 1880-1950, consist of four series, three of which include pre-1913 materials. The views and recommendations of the members of the subcommittees are expressed in numbered and bound **bulletins, 1910-40** (6 ft.), which, within each 10-year segment, are arranged numerically by subcommittee number and thereunder by bulletin number. The bulletins for the ninth revision represent the following subcommittees: 5th, Inorganic Chemicals (2 vols.); 6th, Organic Chemistry (2 vols.); and 14th, Tables, Weights, and Measures (1 vol.). When an agreement was reached, the subcommittees reported to the Revision Committee by means of documents known as "circulars." The **circulars, 1880-1950** (23 ft.), making up each 10-year segment are arranged numerically by volume number and thereunder by circular number. The circulars for the sixth revision, 1880-90, are unbound; those for later revisions are bound, with the documents covering the pre-1913 period arranged in binders as follows: seventh revision, 1890-1900 (3 vols.); eighth revision, 1900-10 (5 vols.); and ninth revision, 1910-20 (4 vols.). Also available is a series of numbered and bound **letters of the Executive Committee of Revision, 1910-40** (1 ft.), which are arranged numerically within each 10-year segment. The letters for the period 1910-12 are bound in seven volumes. Each volume contains a subject index.

## TABLE - 88.12
## SELECT LIST OF HEARINGS OF THE BOARD OF FOOD AND DRUG INSPECTION, 1907-13

| No. | Date | State | Product/Subject | Case No.* |
|---|---|---|---|---|
| 26 | Sept. 6, 1907 | LA | Use of $SO_2$ in molasses | |
| 48 | Oct. 14, 1907 | IA | Sulphurous acid in starch | |
| 59 | Nov. 4, 1907 | IA | Use of benzoate of soda in food products | |
| 80 | Jan. 25, 1908 | MN | Misbranded flour | |
| 82 | Jan. 28, 1908 | MN | Misbranded flour | |
| 191 | Apr. 18, 1908 | CA | Spirits diltilled from uncrystallized sugar from sugar beets | |
| 105 | Apr. 27, 1908 | MO | Extract of lemon (terpeneless) | |
| 114 | June 19, 1908 | LA | Coffee and chicory, seizure case | |
| 139 | Aug. 24, 1908 | AR | Seizure of molasses at Little Rock | |
| 141 | Aug. 27, 1908 | AR | Seizure of molasses at Little Rock | |
| 155 | Sept. 29, 1908 | MO | Bleached flour | |
| 156 | Oct. 1, 1908 | IA | Malt coffee | |
| 164 | Oct. 14, 1908 | MO | Wines | |
| 167 | Oct. 27, 1908 | LA | Roasted coffee and chicory | |
| 168 | Oct. 27, 1908 | MO | Dutch Moka seizure case | |
| 181 | Dec. 8, 1908 | LA | Mustard seed | N.O.638 |
| 187 | Dec. 18, 1908 | LA | Molasses | I.S.1747-A |
| 188 | Dec. 23, 1908 | MO | Lemon extract | I.S.7537 |
| 205 | Jan. 13, 1909 | IA | Rye flour | I.S.9034 |
| 211 | Jan. 29, 1909 | LA | Molasses | I.S.1800-A<br>I.S.1799-A |
| 217 | Feb. 15, 1909 | NM | Salad dressing | |
| 222 | Feb. 18, 1909 | LA | Bourbon whiskey | |
| 229 | Mar. 1, 1909 | MO | Stock feed seizure | |
| 236 | Mar. 9, 1909 | MN | Cereal; breakfast food; cereal | I.S.2958-A<br>I.S.2978-A<br>I.S.7595-A |
| 242 | Mar. 19, 1909 | MN | Breakfast foods | |
| 247 | Mar. 25, 1909 | MN/ | Vanilla | I.S.7092-A |
| | | ID | Lemon extract | I.S.7093-A |
| | | | Monsoon mace | I.S.7675-A |
| | | | Pepper | I.S.5877-A |
| | | | Pepper | I.S.1885-A |
| | | | Syrup | I.S.18529-A |
| 251 | Mar. 31, 1909 | MO | Alum in pickles | |

| No. | Date | State | Product/Subject | Case No.* |
|---|---|---|---|---|
| 255 | Apr. 5, 1909 | MO | Boric acid as a preservative in liquid eggs | |
| 259 | Apr. 5, 1909 | MO | Liquid eggs | |
| 262 | Apr. 7, 1909 | WA/ OR | Re change in standards for condensed milk | |
| 276 | Apr. 19, 1909 | WA | Labeling of salmon | |
| 277 | Apr. 30, 1909 | LA | Syrup | I.S.16615-A<br>I.S.16633-A<br>I.S.19710-A<br>I.S.7462-A<br>I.S.16616-A<br>I.S.18559-A<br>I.S.18556-A |
| 288 | May 1, 1909 | MO | Buckwheat flour | I.S.4981<br>I.S.5111-A |
| 296 | May 7, 1909 | CA | Honey | I.S.10023-A |
| 303 | May 10, 1909 | KS | Abilena water | I.S.19599-A |
| 304 | May 10, 1909 | CA | Seizure of mackeral | |
| 305 | May 11, 1909 | MO | Turpeneless lemon | I.S.8327-A |
| 305a | May 12, 1909 | TX | Wedgewood brand goods | |
| 316 | May 21, 1909 | CA | Apricot brandy | I.S.8289-A |
| 318 | May 21, 1909 | MO | Peach brandy | I.S.16697-A |
| 332 | June 12, 1909 | MN | Cider vinegar | I.S.20603-A |
| 338 | June 18, 1909 | MO | Blackberry cordial | I.S.12264-A<br>I.S.12266-A<br>I.S.12267-A |
| 341 | June 26, 1909 | CA | Condensed milk standards | |
| 344 | June 30, 1909 | MO | Wine labels, OH & MO (General) | |
| 349 | July 7, 1909 | MO | Labeling of Oat feed | |
| 352 | July 14, 1909 | KS | Vinegar, AR Valley cider | |
| 355 | July 19, 1909 | CA | Sardines | I.S.8761-A<br>I.S.8767-A |
| 361 | July 31, 1909 | CA | Apricot brandy cordial | I.S.15094-A |
| 363 | Aug. 3, 1909 | | Yeast | |
| 400 | Oct. 18, 1909 | CO/ KS/ MN | Yeast (H.363 continued) | |
| 402 | Oct. 22, 1909 | TX | Oysters | I.S.24126-A |
| 406 | Oct. 26, 1909 | MN/ CA | Blackberry cordials and wines | I.S.26212-A |
| 408 | Oct. 28, 1909 | MO | Powdered milk (hearing on St. Louis seizures) | |
| 412a | Nov. 9, 1909 | MN | Stock food | |
| 418 | Nov. 23, 1909 | CA | Chocolate and cocoa | |

| No. | Date | State | Product/Subject | Case No.* |
|---|---|---|---|---|
| 420 | Nov. 23, 1909 | CA | Ground chocolate | I.S.16843-A |
| 422 | Nov. 30, 1909 | LA | New Orleans molasses | |
| 426 | Dec. 6, 1909 | CA | Port wine | I.S.9783-B |
| 428 | Dec. 10, 1909 | KS | Vania flour | I.S.5220-B |
| 436 | Dec. 23, 1909 | TX | Preserves | I.S.5223-B - I.S.5228-B |
| 440 | Jan. 6, 1910 | CA | Blackberry cordial | I.S.4628-B |
| 445 | Jan. 18, 1910 | TX | Pure soluble cocoa | I.S.25026-A I.S.24103-A |
| 452 | Jan. 29, 1910 | TX | Seizure of tomatoes in Fort Worth | |
| 459 | Feb. 7, 1910 | MO | Chicory coated blended coffee | I.S.4986-A |
| 464 | Feb. 8, 1910 | CA | Seizure of maple and cane syrup, Los Angeles | |
| 465 | Feb. 8, 1910 | MO | Health flour | I.S.15556-B |
| 467 | Feb. 11, 1910 | MN | Beer standards (General) | |
| 475 | Feb. 25, 1910 | KS | Yeast powder | I.S.11929-B |
| 495 | Mar. 18, 1910 | CA | Blackberry wine | I.S.4171-B |
| 502 | Apr. 2, 1910 | CA | Apricot brandy cordial | I.S.20276-A |
| 503 | Apr. 2, 1910 | WA | Mapleine | |
| 508 | Apr. 7, 1910 | LA | Coffee and chicory | I.S.5120-B |
| 519 | Apr. 21, 1910 | CA | Labeling of wines (General) | |
| 525 | May 2, 1910 | IA/KS | Desiccated eggs (General) | |
| 531 | May 9, 1910 | CO | Grape juice | |
| 547 | May 27, 1910 | CA/ MO | Port wine | I.S.9816-B |
| 575 | July 11, 1910 | LA | Tomato pulp | I.S.10724-B |
| 579 | July 20, 1910 | NE | Essence of peppermint | I.S.12445-B |
| 609 | Oct. 10, 1910 | CA | Apricot brandy | I.S.18738-B |
| 671 | Jan. 17, 1911 | MO | Kornfalfa feed | I.S.18916-B |
| 682 | Jan. 27, 1911 | CA | Port and sherry, invalid brand | N.Y.24268-9 |
| 696 | Feb. 11, 1911 | MO | Cordial of the extract of cod liver oil | I.S.5935-C |
| 711 | Feb. 28, 1911 | IA | Jam | I.S.9706-C |
| 717 | Mar. 3, 1911 | MN | Malt extract | I.S.2279-C |
| 724 | Mar. 27, 1911 | IA | Eggs | S.803 |
| 725 | Mar. 27, 1911 | MO | Sodic aluminic sulphate | S.914 |
| 736 | Apr. 6, 1911 | IA | Dried eggs | |
| 745 | Apr. 18, 1911 | IA | Eggs | S.803 |
| 768 | May 18, 1911 | CA/ CO/IA KS/ MN/ MO/ OR | Mince meat (General) | |

| No. | Date | State | Product/Subject | Case No.* |
|---|---|---|---|---|
| 783 | June 23, 1911 | WA | Frozen shad | I.S.13464-C |
| 801 | July 26, 1911 | TX | Coffee | S.830 |
| 815 | July 31, 1911 | MN | Beer (General hearing) | |
| 827 | Oct. 4, 1911 | LA | Dairy ration | I.S.9447-C |
| 853 | Oct. 27, 1911 | CA | Condensed and evaporated milk, request for a standard | |
| 860 | Oct. 28, 1911 | MO | Malt nutrine | I.S.5919-C |
| 868 | Nov. 6, 1911 | TX | Whiskey | I.S.3506-D |
| 872 | Nov. 9, 1911 | MO | Chocolate cigars | I.S.14466-C |
| 886 | Nov. 13, 1911 | MO | Chocolate cigars | I.S.14466-C |
| 896 | Nov. 18, 1911 | KS | Sorghum and corn syrup | S.1020 |
| 900 | Nov. 23, 1911 | CA | Preserved fruits | |
| 907 | Nov. 23, 1911 | WA | Canned goods (leeks, swells) | |
| 914 | Dec. 5, 1911 | CA | Condensed milk standards | |
| 928 | Dec. 5, 1911 | CO | Mace | I.S.412-D |
| 934 | Dec. 14, 1911 | LA | Sodarine | I.S.12010-D |
| 940 | Dec. 20, 1911 | CA | Orange wine | I.S.1186-D |
| 953 | Jan. 3, 1912 | IA | Criticism of tentative ruling on mince meat | |
| 972 | Jan. 16, 1912 | MO | Discussion of tentative decision regulating the importation and sale of opium, morphine, etc. | |
| 984 | Jan. 24, 1912 | CA/ MO | Wine | I.S.1661-2-D<br>I.S.12285-6-D |
| 988 | Jan. 25, 1912 | CA | Chinese walnuts | S.1222 |
| 993 | Jan. 30, 1912 | WA | Condensed milk standards | |
| 995 | Jan. 31, 1912 | MN/ MO | Branding grain shipped under inspection certificates | |
| 1001 | Feb. 8, 1912 | MO | Arrowroot biscuit<br>Chocolate cigars | I.S.3514-D<br>I.S.14466-C |
| 1007 | Feb. 1, 1912 | CA | Use of the word "Souvenir" to describe wines | |
| 1008 | Feb. 13, 1912 | MN | Sulphured oats | |
| 1013 | Feb. 16, 1912 | CA/ MO | Burgundy | I.S.10180-D |
| 1016 | Feb. 16, 1912 | CA | Chinese walnuts | S.1222 |
| 1019 | Feb. 20, 1912 | CA | Blackberry jam and cranberry sauce | |
| 1028 | Mar. 6, 1912 | | Opium, tentative decision | |
| 1040 | Mar. 21, 1912 | MO | Opium, tentative decision | |
| 1045 | Mar. 28, 1912 | MO | Use of talc and glaze in confectionery coatings | |
| 1048 | Mar. 29, 1912 | CA | Wine | I.S.14087-D<br>S.1248<br>S.1249 |

| No. | Date | State | Product/Subject | Case No.* |
|---|---|---|---|---|
| 1054 | Apr. 9, 1912 | MO | Orangeade syrup | S.1265 |
| 1059 | Apr. 17, 1912 | CA | Gum tragacanth | I.S.2560-D |
| 1062 | Apr. 19, 1912 | WA | Condensed milk standards | |
| 1071 | Apr. 25, 1912 | WA | Canned salmon | I.S.16939-D |
| 1079 | May 2, 1912 | CO | Olive oil | S.1362 |
| | | | | S.1363 |
| 1088 | May 10, 1912 | UT | Evaporated milk standards | |
| 1119 | June 7, 1912 | CO | Olive oil | I.S.15054-D |
| | | | | I.S.15096-D |
| | | | | I.S.15100-D |
| | | | | I.S.16663-D |
| | | | | I.S.16664-D |
| | | | | I.S.16665-D |
| | | | | I.S.17823-D |
| | | | | I.S.20240-D |
| | | | | I.S.20241-D |
| | | | | I.S.20242-D |
| 1123 | June 8, 1912 | TX | Liquid smoke | I.S.15637-D |
| 1124 | June 10, 1912 | CA | Salted anchovies | S.3058 |
| | | | | S.3074 |
| | | | | S.3079 |
| 1129 | June 21, 1912 | MO/ CA | Port wine | I.S.17303-D |
| 1130 | June 21, 1912 | MN/IA | Sulphuring oats | |
| 1131 | June 22, 1912 | LA | Shrimp pack for coming season | |
| 1132 | June 21, 1912 | LA | Gin | I.S.17101-D |
| 1147 | July 9, 1912 | MO | 118 cases of canned tomatoes | S.1451 |
| 1149 | July 12, 1912 | MN | Malt breakfast food | I.S.16938-D |
| | | | | I.S.10105-D |
| 1153 | July 13, 1912 | LA | Sugar cane and corn syrup | I.S.18879-D |
| 1163 | July 19, 1912 | IA/MO | Canned tomatoes | I.S.19329-D |
| 1170 | July 26, 1912 | NE | Juniper gin | I.S.18371-D |
| 1179 | Aug. 3, 1912 | NE | Juniper gin | I.S.18371-D |
| 1183 | Aug. 9, 1912 | CA | Sparkling burgundy | I.S.12448-D |
| 1193 | Aug. 20, 1912 | CA | Sparkling burgundy | S.1237 |
| 1210 | Sept. 4, 1912 | CA | Labeling of canned tomatoes | |
| 1219 | Sept. 30, 1912 | KS | Beer | I.S.37833-E |
| 1221 | Oct. 1, 1912 | MO | Cherry extract | I.S.2030-D |
| 1228 | Oct. 8, 1912 | IA | Canned corn | I.S.16692-D |
| 1229 | Oct. 8, 1912 | CA/ MN/ MO | Digestive malt extract | I.S.3889-D |

| No. | Date | State | Product/Subject | Case No.* |
|---|---|---|---|---|
| 1233 | Oct. 14, 1912 | CA | Copper sulphate used in greening of foods | F.I.D.148 |
| 1239 | Oct. 19, 1912 | MO | Jamaica rum | I.S.12479-D |
| 1242 | Oct. 21, 1912 | MO | Peas | I.S.14 & 35-E |
| 1246 | Oct. 25, 1912 | MO | Hungarian liqueurs | N.Y.34516<br>N.Y.34632<br>N.Y.34633<br>N.Y.34515 |
| 1255 | Nov. 7, 1912 | CO | Sodium aluminum sulphate | I.S.37354-E |
| 1256 | Nov. 8, 1912 | MO | Condensed smoke | |
| 1259 | Nov. 8, 1912 | LA | Labeling of coffee | |
| 1273 | Nov. 19, 1912 | MO | Scuppernong wine | I.S.18161-D |
| 1274 | Nov. 19, 1912 | NE | Conference on oat clippings, screenings, etc. | |
| 1275 | Nov. 20, 1912 | MO | Malt nutrine | |
| 1278 | Nov. 23, 1912 | CA | Jam, catsup, and tomatoes | |
| 1284 | Dec. 2, 1912 | KS/TX | Cider vinegar | I.S.32-E<br>I.S.37-E |
| 1285 | Dec. 4, 1912 | CA | Beans | Chi.2721 |
| 1298 | Dec. 19, 1912 | NE | Eckman's alterative | I.S.1612 |
| 1301 | Dec. 23, 1912 | CA | Ground chocolate | I.S.3203-E<br>I.S.37002-E |
| 1307 | Jan. 3, 1913 | NE | Eckman's alterative | I.S.3259-E |

* I.S. = Interstate Shipment;
S. = Seizure
Chi. (Chicago), N.O. (New Orleans), N.Y. (New York) = Import Detention
F.I.D. = Food Inspection Decision.

The case files have not been accessioned by the National Archives.

## TABLE - 88.15
## Select List of Notices of Judgment Issued by the Board of Food and Drug Inspection, 1908-10

| Year | Number | State | Subject |
|---|---|---|---|
| 1906 | 13 | MN | Misbranding of flour |
| | 23 | OK | Adulteration and misbranding of vinegar |
| | 24 | LA | Adulteration and misbranding of molasses |
| | 26 | OK/TX | Misbranding of canned blackberries |
| | 27 | OK/TX | Misbranding of canned blackberries |
| | 33 | CO | Misbranding of maple syrup |
| | 34 | CA/OK | Misbranding of peaches |
| | 35 | CA/OK | Misbranding of canned peaches |
| | 36 | AR/MO | Misbranding of canned apples and blackberries |
| | 38 | IA/UT | Misbranding of canned corn |
| | 39 | MO | Misbranding of corn and beans |
| | 52 | OK/IA | Misbranding of canned corn |
| | 53 | IA/OK | Misbranding of canned corn |
| | 54 | KS | Misbranding of a drug (Muco-Solvent) |
| 1909 | 63 | CO/NE | Misbranding of canned corn |
| | 68 | LA | Misbranding of whiskey |
| | 72 | CO/UT | Misbranding of canned cherries |
| | 74 | CA/WA | Misbranding of maple syrup |
| | 75 | ID/WA | Adulterated and misbranded pepper |
| | 77 | CO/UT | Misbranding of canned tomatoes |
| | 83 | LA | Misbranding of wine |
| | 89 | LA/TX | Misbranding of evaporated apples |
| | 91 | ID/MO/OR | Misbranding of flavoring extracts |
| | 92 | CA/IA | Misbranding of canned peaches, plums, pears, and apricots |
| | 93 | OK | Misbranding of beans |
| | 97 | CO/UT | Misbranding of canned tomatoes |
| | 99 | AZ/CA/OR/WA | Misbranding of syrup |
| | 101 | MO | Adulteration of oats |
| | 104 | LA | Adulteration and misbranding of stock feed |
| | 105 | CA/IA/OR | Adulteration and misbranding of a cereal |
| | 110 | CO/NE | Misbranding of syrup |
| | 111 | ND | Misbranding of catsup |
| | 114 | CA/WA | Misbranding of canned apricots |
| | 115 | LA | Adulteration and misbranding of lemon extract |
| | 120 | KS/MO | Adulteration and misbranding of pepper |
| | 122 | LA | Adulteration and misbranding of strawberry extract |

| Year | Number | State | Subject |
|---|---|---|---|
| 1910 | None [129] | AZ/CA | Adulteration and misbranding of buckwheat flour |
| | None [130] | LA | Adulteration and misbranding of lemon extract |
| | None [131] | IA/MN | Misbranding and adulteration of rye flour |

# Record Group 95

## RECORDS OF THE FOREST SERVICE

*The question of timber culture upon the great plains and timber preservation upon lands yet in possession and ownership of the general government is a problem of a different character, and one of the most interesting that can occupy the attention of statesmen. Successful forestry, in its very nature, necessitates an entire change in our careless methods and shifting, changeful habits, and compels us to do whatever is done thoroughly well, and to persevere in the well-doing; to select men fitted by nature for the occupation of foresters, and to secure them a life estate or a good-behavior estate in these occupations, is the lesson taught by our European contemporaries.*

*Wm. G. LcDuck, Commissioner of Agriculture, in Franklin B. Hough,* Report Upon Forester, *1878, Vol. 1, p. 4.*

### INTRODUCTION

**95.1** The development of the Forest Service dates from 1876, when Congress authorized the Commissioner of Agriculture to appoint a special agent to study general forest conditions in the United States. In 1881 a Division of Forestry was established in the Department of Agriculture to function primarily as an investigative and informational office. In 1901 this Division became the Bureau of Forestry, with responsibility for forest management activities, forest investigations, tree-planting, and records. Responsibility for timber protection and forest reserves, however, was vested in the Department of the Interior.

**95.2** In 1854 the General Land Office of the Department of the Interior had been charged with suppressing timber depredations on the public domain, a former function of the Treasury Department. The attendant duties were carried out by special deputies appointed by the registers and receivers at the local land offices until 1877, when the Commissioner of the General Land Office assumed that responsibility. In 1891 Congress authorized the establishment of forest reserves from timberlands on the public domain and entrusted the administration of these reserves to the General Land Office. The Yellowstone area, selected as the site of the first national park in 1872, became the site of the first timber land reserve, as well on March 30, 1891. By 1901 the General Land Office found it was necessary to establish a Forestry Division to handle the work involving the creation and administration of the forest reserves. The Division was headed by a trained forester, who was assisted by three other foresters.

**95.3** The division of responsibility for forest matters between the Department of Agriculture and the Department of the Interior lasted until 1905. In December 1904 President Theodore Roosevelt recommended the consolidation of all Federal forest work under the Bureau of Forestry in the Department of Agriculture. A bill to that effect became law on February 1, 1905, and the Division of Forestry of the General Land Office was merged into the Bureau of Forestry of the Agriculture Department. In July 1905 the name of the Bureau of Forestry was changed to the Forest Service. Thereafter, the only Federal forest-related function that did not fall within the jurisdiction of the Forest Service was surveying and mapping the forest reserves, a function performed by the Geological Survey, as stipulated by an 1897 act of Congress.

**95.4** Two noteworthy acts affecting the Forest Service were passed by Congress in 1906. The Forest Homestead Act of June 11, 1906, authorized the sale of selected tracts within the forest reserves for agricultural purposes, provided private ownership did not conflict with the overall development of the forest. An act "for the preservation of American antiquities," passed on June 8, 1906, authorized the President to create, within the boundaries of the forest reserves, reservations or "monuments" to preserve features of "historic or scientific interest." Eventually the Forest Service administered 15 such monuments; in 1933, however, jurisdiction over the monuments was transferred to the National Park Service, in the Department of the Interior.

**95.5** In 1907 forest reserves were redesignated national forests and were grouped into six districts. During the following year, the Service decentralized the administration of fieldwork by establishing district offices with authority over most matters affecting the national forests within their respective areas. The

first district offices were headquartered in Missoula, MT, Denver, CO, Albuquerque, NM, Ogden, UT, San Francisco, CA, and Portland, OR. Between 1914 and 1930 three more districts were created. In 1930 the district offices were redesignated regional offices.

**95.6** Records related to the Forest Service and its activities can be found in other record groups as well. Record Group 287, Publications of the U.S. Government, includes the historical studies and other publications issued by the Forest Service. Docket books and correspondence relating to the forest reserves that were administered by the Department of the Interior are among the records of the General Land Office, Forestry Division (Division R) in Record Group 49, Records of the Bureau of Land Management. Some additional administrative correspondence is in Record Group 48, Records of the Office of the Secretary of the Interior. Under terms of a short-lived agreement, 1908-9, the Forest Service undertook the management of forests located on Indian reservations, and relevant records are in Record Group 75, Records of the Bureau of Indian Affairs. Record Group 79, Records of the National Park Service, includes records concerning the national monuments that were established within the national forests. Finally, Record Group 16, Records of the Office of the Secretary of Agriculture, includes correspondence concerning the general supervision of activities of the Forest Service. Copies of letters prepared by the Forest Service for the signature of the Secretary, 1906-29, are reproduced as part of National Archives Microfilm Publication M440, *Letters Sent by the Secretary of Agriculture, 1893-1929* (rolls 295-372).

**95.7** Most textual and photographic records of the Washington office of the Forest Service in the National Archives are described in *Preliminary Inventory of the Records of the Forest Service* (PI 18), compiled by Harold T. Pinkett, revised by Terry W. Good, and issued in 1969. In general, the discussion of the records in this chapter follows the organizational pattern used in the inventory. The *Preliminary Inventory of the Cartographic Records of the Forest Service* (PI 167), compiled by Charlotte M. Ashby and published in 1967, describes maps and related records in considerable detail.

**95.8 Editorial Note**: Most cartographic and photographic records are maintained apart from the textual records. The Forest Service cartographic records are arranged by administrative units (see 95.10) and, whenever possible, are discussed with the appropriate textual records. Those maps that cannot be assigned to an administrative unit are described in a general section at the end of the discussion of the records of the Washington office. Also described in that section are the photographic records, which are usually identified by alphabetic collection designators instead of by series titles; the designators are shown in parentheses. Finally, series consisting of records that originated prior to 1913 but extending beyond that date are described in their entirety; no attempt has been made to determine what part of such series relates to the pre-1913 period. It should also be noted that unless stated otherwise the term "State," when used to describe the arrangement of records, covers both States and Territories.

**95.9** Many series of records are arranged alphabetically by name of forest or numerically by district or region number. Because forests were often renamed, combined, or abolished, and the districts and regions were realigned and/or increased in number, two tables listing the districts, the regions, and their component forests, are provided at the end of this chapter to serve as access guidelines. Most records of the Forest Service field offices that are in the National Archives regional archives originated after 1912, and they are not discussed in this chapter. The exceptions are described in varying degrees of detail in the section on records maintained in the field.

### The Forest Service Filing System

**95.10** By 1901 separate files were being maintained by the various offices of the Bureau of Forestry, and this practice of decentralized filing continued after the establishment of the Forest Service. As a result, no large central correspondence or subject files cover all activities of the Forest Service. Instead, the records are arranged by office or division. In this guide, information about the functions of each administrative unit precedes the discussion of its records.

**95.11** Very little information about the filing systems used by the Division of Forestry of the Department of Agriculture is available. Apparently separate files were maintained for incoming and outgoing correspondence, with press copies of outgoing letters bound in volumes. In 1906 most press copying was discontinued, and carbon copies of outgoing letters were attached to related incoming letters. In 1907 the practice was begun of indicating by means of alphabetical symbols the file in which correspondence

was to be placed. For filing purposes, each branch, office, and section was assigned a key letter or letters to be used on all correspondence. In 1908 subject designations were added to the key letters, an innovation that laid the basis for the standard subject-filing system still used by the Forest Service.

**95.12** The principle underlying the subject-filing system has been that all records pertaining to a given subject, usually a major function such as cooperation, inspection, or supervision, are to be filed together. Various secondary subject headings have been devised as needed. A deviation from this system has been the maintenance by each major administrative unit of general correspondence files in which miscellaneous and relatively unimportant records have been filed alphabetically by name of correspondent. In general the main files of the Service since 1908 have been maintained according to a subject classification arranged on a self-indexing basis. The complete classification system, with examples of the designations used in the Washington and the regional offices, has been issued at various times in mimeographed circulars entitled "Subjects, Designations, and Filing System," several copies of which are available in the National Archives.

## RECORDS MAINTAINED BY THE WASHINGTON OFFICE

### RECORDS OF THE OFFICE OF THE CHIEF AND OTHER GENERAL RECORDS

**95.13** The title "Forester" was used from 1899 to 1935 to designate the head of the Forest Service. The Forester was directly responsible to the Secretary of Agriculture and charged ith general administration of the Forest Service and supervision of special types of work conducted in his office. Activities carried on in the Forester's office at various times included special work in connection with silvics, laws, general inspection, editing, dendrology, information, publications, statistics, accounts, engineering, and maintenance. The chief assistant of the Forester and head of the Service in his absence was designated "Associate Forester," and special phases of administration were assigned to "Assistant Foresters." In 1935 the title "Chief" replaced that of "Forester," with, however, no changes in basic authority.

**95.14** The general records of the Forest Service include files of its predecessors, files of the Office of the Chief, and files relating to services or special functions that cannot be classified conveniently according to their origin in particular administrative units.

**95.15** The bulk of the predecessor records consists of correspondence. Included are **letters received, 1888-99** (11 ft.), and **letters sent by the Division of Forestry, 1886-99** (52 vols., 5 ft.). The letters received are arranged in two chronological segments, 1888-98 and 1898-99, with each segment arranged alphabetically by name of correspondent. The letters concern the work of the Division in timber testing, tree measurement, identification of tree specimens, cooperation with State and private agencies, and dissemination of information in forestry, and reveal the attitude of various groups toward forest legislation and forest destruction and the work of State forestry organizations. The Division's replies to the incoming letters consist of bound press copies arranged chronologically, with an index in each volume. Also from this early period are some letters received by Bernhard E. Fernow, 1897, who was Chief of the Division of Forestry from 1886 to 1898 (see 95.77.7).

**95.16** Records transferred from the Department of the Interior include **press copies of letters sent by the Commissioner of the General Land Office, Aug. 25-Sept. 16, 1903** (1 vol., 1 in.), relating to many phases of forest administration, including personnel matters, accounts, permits, claims, and petitions. The letters are arranged chronologically and are indexed. Press copies of **accounts and vouchers of the General Land Office, 1898-1903** (10 vols., 1 ft.), chronologically arranged, record expenses, wages, leave, and days employed of forest supervisors and rangers. The series is incomplete, and some volumes show fire and water damage. Each volume is indexed. Also included are **field office records of forest supervisors, 1898-1904** (27 vols., 3 ft.), consisting of press and carbon copies of letters and reports sent by forest supervisors in Colorado, Montana, and New Mexico. One diary of the supervisor in Montana is also included. The records, arranged alphabetically by name of supervisor and thereunder chronologically, relate to all phases of forest administration. The volumes are indexed.

**95.17** Some Forest Service officials serving in the field were required to keep official diaries of their activities while on duty. A selection of these **diaries, 1906-50** (69 ft.), arranged numerically by region and thereunder by name of national forest, has been preserved as a record of the normal routines and proce-

dures followed by Forest Service employees. The sample includes a few diaries for H.N. Wheeler, who worked at Gunnison National Forest and Montezuma National Forest, 1906-7; C.N. Woods, a forest supervisor in Region 4, 1909-13; and B. Mahoney, an assistant ranger at Minidoka National Forest, 1908-13.

**95.18** Covering the transitional period from the Division of Forestry to the Forest Service is the **general correspondence of the Forest Service, 1898-1908** (24 ft.). This series covers a wide range of subjects, relating chiefly to personnel, organization, formulation of working plans, work of field crews, examination of timbered areas, and surveys of forest reserves. The documents are arranged in two segments and thereunder alphabetically by name of correspondent or organization. The first segment consists of material on the procurement of supplies, personnel, distribution of information, annual appropriations, timber testing, surveys of forest reserves, and investigations of forest districts. The second segment is largely concerned with personnel matters, although it includes some investigatory materials compiled to answer specific requests for information about trees and timber.

**95.19 Records of the Office of the Chief, 1908-47** (48 ft.), relate to administration, supervision, planning, and general activities of the Forest Service. Included are correspondence, annual and quarterly reports, other reports, annual plans of work, memorandums, and maps, are arranged alphabetically by subject. Other records from the Office of the Chief include files relating to two Foresters, Gifford Pinchot and his successor, Henry S. Graves. Chronologically arranged **circulars and orders from the Office of the Chief, 1903-7** (2 vols., 3 in.), relate chiefly to administrative regulations, clerical matters, and reporting procedures.

**95.20 Selected records relating to the administration of Gifford Pinchot, 1905-13** (3 ft.), were withdrawn from other files of the Forest Service for use in the preparation of Pinchot's autobiography, *Breaking New Ground*. Since Pinchot began his Government service as Chief of the Forestry Division in 1898, these records cover only the later years of his administration. Included are correspondence, memorandums, reports, newspaper clippings, and legislative bills relating to conservation, coal lands, the Inland Waterways Commission, mining, school lands, laws, supervision of national forests, and miscellaneous matters. The records are arranged by subject. Also arranged by subject are **records relating to the Ballinger-Pinchot controversy, 1904-10** (4 ft.), which stemmed from Pinchot's public protest against certain actions taken by Secretary of the Interior Richard A. Ballinger. Among the records collected from the Office of the Forester and from District 6, Portland, OR, are correspondence, reports, memorandums, and maps relating to three major issues in the controversy: withdrawal of powersite lands from entry by private persons, withdrawal of sites in national forests for administrative use by the Forest Service, and administration of the Alaskan coalfields (Cunningham coal cases). The controversy led to Pinchot's dismissal and Ballinger's exoneration and eventual resignation.

**95.21** Considerably less extensive are the **records of Forester Henry S. Graves, 1911** (2 in.), who served as Forester for about ten years. The records are arranged by name of correspondent.

**95.22** Among the general records are press copies of **letters sent by the Office of the Associate Forester, 1905-8** (17 vols., 2 ft.), primarily to personnel in the regions, concerning general administrative matters within the Service, including the issuance of permits to use the forests for grazing, mining, and lumbering. The letters are arranged chronologically in indexed volumes, some of which were damaged by fire and water.

**95.23** Records from the Office of Law include two correspondence files. Letters, memorandums, telegrams, reports, contracts, bills, depositions, resolutions, newspaper clippings, blueprints, and pamphlets make up the **general correspondence, 1905-8** (10 ft.), which is arranged by subject according to alphabetic files designations. The documents relate to prosecution for violations of trespass laws, contested special forest-use cases, litigated claims, and forest legislation. Timber trespass dockets are among the records described in 95.77 (item 26). Many of the records concern the leasing of land to corporations, grazing permits, mines and mining claims, and claims of railroads and squatters. Also included are records relating to Government control over water power and the utilizations of water power corporations. Among businesses mentioned are the Northern Pacific and the Chicago, Milwaukee and St. Paul railway companies, and the Desert Salt Company. The **correspondence relating to public inquiries, 1905-9** (6 ft.), arranged alphabetically by name or addressee or by subject, concerns legal questions raised by residents within national forests and users of national for-

est resources. The memorandums, telegrams, reports, and newspaper clippings, constituting this file include information concerning forest conditions, pipelines, power plants, forest taxation, land cultivation, and game laws. Letters sent and letters received, arranged chronologically, make up the **correspondence of the field office title attorney, 1913-16** (2 ft.), which relates to legal, fiscal, and administrative activities.

**95.24** Records from the Section of Inspection consist of correspondence and reports. The **correspondence, 1906-8** (9 ft.), is arranged alphabetically by surname of inspector. The files of two inspectors, Daniel D. Bronson and W.C. Clos, are arranged by Forest Service district. Composed chiefly of letters pertaining to inspections, travel, work, suggestions, and problems of inspectors in the field, the correspondence covers such subjects as the redistricting of reserves, changes in reserve boundaries, homestead claims, trespass cases, and timber sales. A folder of maps showing national forests in northern California is filed at the end of this series. The **reports, 1906-8** (13 ft.), on personnel and conditions in the national forests, are arranged numerically by Forest Service district and thereunder by name of national forest. The inspectors reported on such topics as timber sales, grazing, equipment, improvements, organization, and administration, and made recommendations on matters ranging from the planting of trees to increasing the deputy ranger's salary. A small file of correspondence regarding inspectors is filed with the records described in 95.77 (item 11).

**95.25** Approximately half of the **Executive orders, 1907-12** (3 ft.), that constitute this series concern the Forest Service or relate to national forests in the western United States. Issued by Presidents Roosevelt and William Howard Taft, the orders create or rename forests, adjust forest boundaries, and establish ranger stations in the forests. The remaining orders do not pertain to forest matters but appear to be a collection maintained for general reference.

**95.26** Other general records include the **minutes of the Service Committee, 1903-35** (3 ft.), which are arranged chronologically and are a valuable source of information on the administration of the Forest Service. The Committee, originally called the Divisional Committee and later the Bureau Committee, was organized in March 1903. It comprised the Forester and the divisional heads and assisted in the formulation of administrative policies and procedures for the entire Service. The minutes provide information on conditions such as fires, erosion, road damage, road building, and boundary changes in specific national forests. The records have been reproduced as microfilm publication M1025.

**95.27** The Weeks Act of March 1, 1911, established the National Forest Reservation Commission to consider and decide upon lands recommended by the Secretary of Agriculture for acquisition as national forests by purchase or exchange and to fix the consideration to be paid. The **records of the National Forest Reservation Commission, 1911-76** (160 vols., 33 ft.), consist of minutes of the Commission's meetings and include summaries, descriptions, and appraisals of land recommended. The records are arranged in binders, by date of meeting.

**95.28** Also among the general records are correspondence, reports, and other records concerning conservation organizations such as the American Forestry Congress and the National Conservation Congress that were interested in the Nation's forest resources. In 1908 President Theodore Roosevelt appointed the National Conservation Commission to investigate the condition of the Nation's natural resources. The Forester chose Assistant Foresters W.T. Cox and R.S. Kellogg to assist the Commission in compiling material concerning forest resources. The resulting questionnaires, correspondence, and memorandums constitute the **records relating to the National Conservation Commission, 1908-9** (2 ft.), which are arranged alphabetically by name of correspondent.

**95.29** The Forest Service maintained an archival history file at both the central office and the district (now regional) office level. Included are oral histories and forest histories that are not part of official Forest Service publications; documentation on special events such as anniversaries of the Forest Service, commemorations, and dedications; research papers and reports of historical value that are not preserved elsewhere; publications such as "History Line"; biographies of persons of interest to the public and historical community; and other items deemed to be of historical value. While most records of this nature are held by the regional archives, relevant general records of the central office include unarranged **papers relating to the history of forestry in the United States, 1882-1909** (6 in.), and a scrapbook of chronologically arranged **clippings from Colorado newspapers, 1907-9** (1 vol., 3 in.), concerning forest-related activities and policies on a national and State level. The Colorado stories, in particular, deal

largely with the management of the national forests and are critical of the Forest Service and Pinchot; for related materials see 95.77 (items 12, 24, and 25). Also pertinent are four fabric **charts showing land resource use in the United States, ca. 1905**. Three of the charts, "Present Land Classes," "Probable Future Land Classes," and "Total Area of U.S. Land Classes,"show lands categorized as forest, farm, and grass and desert lands. The fourth chart, "Coal Production of the U.S," is a graph representing the tonnage of coal production from 1816 to 1905.

**95.30** A collection of **forest service regulations, manuals, and guides, 1905-40** (1 ft.), is arranged roughly by subject and thereunder chronologically by publication date. Included are regulations from 1907 concerning fiscal matters, the use of national forest reserves (1905, 1907, 1908), and the preparation of forest surveys and maps (1907, 1910, 1912); a manual of procedure (1908); and sections of the "National Forest Manual" dealing with special uses (1911), trespass (1911), forest plans, extensions, and investigations (1911), cooperation (1911), dendrology (1911), timber sales and settlement (1911), administrative sites (1912), and general administration and protection (1912).

## Records of the Administrative Divisions

### Records of the Division of Operation

**95.31** A Branch of Operation was established in the Forest Service in 1907, replacing the Office of Forest Reserves, which had had charge of the forest-reserve force and its equipment and had been responsible for the examination of lands for the establishment of new forest reserves or for eliminations from and additions to existing reserves. The new Branch was composed of the Offices of Maintenance, Accounts, Organization, Engineering, and Lands. Organizational changes after 1908 resulted in the transfer of various functions, so that by 1911 activities of the Branch were limited mainly to the supervision and control of the business organization, fire protection, and permanent improvements in the Service. After several more changes in status the Branch was made a division in 1935 and charged with the application of scientific administration to all Service functions.

**95.32** The records of the Division and its predecessors provide a valuable source of information regarding the supervision of the business organization and certain technical work of the Forest Service. Among the records are a number of incomplete files for various subdivisions as well as more complete divisional files. Also included are the **records of the Office of Forest Reserves, 1905-7** (4 ft.), the predecessor of the Branch of Operation, which are arranged roughly by subject and consist of fire reports, monthly reports, and correspondence from forest supervisors.

**95.33 General correspondence, 1901-39** (70 ft.), primarily administrative in nature, consists of letters, telegrams, reports, forms, minutes, proceedings, agreements and contracts, arranged alphabetically by subjects such as personnel, equipment and supplies, finance, improvements, organization, studies, and supervision. These records include information about cooperative agreements, appropriations, budget allotments, and changes in field office locations. Also included are reports concerning buildings occupied by Forest Service facilities. Although the **correspondence of the Office of Organization, 1905-9** (10 ft.), relates chiefly to applications for employment, requests for information, and personnel questions and problems, some of the documents contain information on the condition of forest reserves, protection of the water supply, and fire and flood prevention. The records are arranged alphabetically by name of correspondent. **Miscellaneous records, 1904-13** (8 ft.), consist of circular letters, orders, memorandums, and correspondence relating to various phases of business management in the Forest Service.

### Records of the Division of Information and Education

**95.34** Several units with various names have handled the information and education work of the Forest Service. This work began in the Section of Office Work of the Division of Forestry, which handled general correspondence, distributed publications, and maintained a library. In 1902 these duties were given to the Office of Records. By 1904 editorial work, including the supervision of Bureau publications and the dissemination of forestry information through press releases, had become a function of the Forester's Office. The desire to diffuse and popularize knowledge of scientific forestry led to the creation of the Office of Publication and Education in 1905. Two years later, however, the dissemination of information again became a function of the Forester's Office while a unit in the Branch of Products was responsible for publications. In 1910 information

and publication work were once more brought together in the Office of the Editor of the Forester's Office, which handled the work until 1920, when the functions of the Office of the Editor were taken over by the Branch of Public Relations. After a number of other changes, the Division of Information and Education was established in 1935 to plan, coordinate, and direct virtually all informational and educational activities of the Forest Service.

**95.35** The Division's **general correspondence, 1905-41** (55 ft.), is organized into nine general subject categories: Cooperation, Information, Inspection, Publications, Special, Supervision, Press Releases, Information Correspondence, and Publication Correspondence. The records within each category are arranged either alphabetically by secondary subject headings or chronologically by year. Among the records are unpublished manuscripts, reports, photographs, maps, clippings, publications, press releases, and memorandums. The major subjects covered by the records include cooperation with States and national organizations, forest fire prevention, colleges and universities offering degree programs in forestry, and recreation in the national forests. **Correspondence of the Office of the Editor, 1905-17** (13 ft.), consists largely of copies of letters responding to requests from secondary schools, colleges, and universities for Forest Service publications, photographs, and the loan of slides. Also included are replies to a survey of schools regarding the availability of forestry courses. The records are arranged in four subject categories: Publications, 1909-13; Education, 1908-12; Schools Teaching Forest Studies, 1909-11; and Publication and Education, 1915-17. A small file of **correspondence of special agents Enos A. Mills and Thomas E. Will, 1906-8** (5 in.), documents the activities of two agents who traveled throughout the United States, delivering lectures on forestry and the Forest Service to town meetings, chautauquas, women's club meetings, State forestry associations, and schools. The topics discussed included the uses of national forest land, water resources, and the establishment of national forests.

**95.36** The series **news articles and press releases, 1900-33, 1937-46** (19 ft.), consists of two groups of closely related records: published articles either written about the Forest Service or by Forest Service personnel; and press releases, short news bulletins, and reports issued by the Forest Service, including two volumes of press bulletins and folders of miscellaneous new items covering the period from 1900 to 1908. The subjects covered include forest fires, investigations, grazing, lumber operations, recreation, utilization of land and resources, and national water resources. A collection of **regional publications, 1910-41** (17 ft.), consists primarily of materials received by the Washington office from the field offices. Included are reports, newsletters, press releases, bulletins, journals, and cartoons. Among the States represented in this series are Arizona, Arkansas, California, Colorado, Idaho, Minnesota, Montana, Nevada, New Mexico, North Dakota, Oregon, Utah, and Washington. A select list of publications, chiefly newsletters, is given in Table - 95.36.

**95.37** The Division of Forestry used its exhibit at the World's Columbian Exposition, held in Chicago in 1893, to acquaint the viewers with the condition of forests in the United States and to urge the necessity of establishing a national forest system. The major feature of the Forestry exhibit was the arrangement of tree trunks, one from each State and Territory, to symbolize the Federal structure of government. The **correspondence relating to the World's Columbian Exposition, 1890-93** (6 in.), consists mainly of letters from private companies regarding preparations for the exhibit but also includes some newspaper clippings, pamphlets, advertisements, exhibit cards, and authorizations. Records relating to Federal participation in the Exposition are found in Record Group 43, Records of International Conferences, Commissions, and Expositions, and in several other record groups. For additional information see *Preliminary Inventory of the Records of United States Participation in International Conferences, Commissions, and Expositions* (PI 76) and supplement (NC-95), and *The Trans-Mississippi West, 1804-1912: Part I, A Guide to Records of the Department of State for the Territorial Period.*

Records of the Division of Engineering

**95.38** Engineering work began to receive special attention in the Forest Service in 1907, when the Office of Engineering was established in the Branch of Operation. This Office had charge of the construction of roads, trails, telephone lines, and other permanent improvements and also exercised general supervision over engineering work performed by private individuals in national forests. In 1908 the Office of Engineering was superseded by the Office of Geography, which was charged with the examination of General Land Office records relating to land titles, com-

pilation of the "Forest Atlas" (a function previously assigned to the Office of Forest Management), and the photographic and mapping work of the Forest Service. In 1915 engineering work was transferred to the Forester's Office, but two years later it was given to the Branch of Engineering. This arrangement continued until 1935, when the Division of Engineering was organized.

**95.39 General correspondence, 1906-10** (3 ft.), of the Office of Geography relates to questions of land alienation, classification, boundaries, and other matters, including requests by private persons for maps and technical information. Part of the records are filed by surname of correspondent under the following general subject designations: General Correspondence, 1906-10; Correspondence with Engineering Applicants, 1907-8; and Correspondence with Forest Service Engineers and Surveyors, 1907-8. The remaining records, chiefly letters exchanged between the Geographer and field officials, are arranged by Forest Service district and thereunder alphabetically by name of national forest. For each district, however, separate files are found, labeled "Geography," "Atlas," and "Drafting." The records pertain to forests located in Arizona, Arkansas, California, Colorado, Idaho, Minnesota, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

**95.40** One of the chief functions of the Office of Geography was the compilation of the "Forest Atlas," namely the drafting and publication of maps of the forests to show the nature of the land and the forests, their extent and use, grazing conditions, and other matters. **Correspondence relating to an atlas of national forests ("Forest Atlas"), 1906-9** (9 in.), is arranged in two alphabetical segments, one by name of forest, the other by name of Federal Government department or agency. The correspondence relates to various phases of this project, much of it concerning the compilation of township plats for forest lands and the exchange of maps and information with pertinent Government agencies.

**95.41** The cartographic records, which are filed apart from the textual records, include the atlases and related procedural materials. The program for the preparation of the Forest Atlases, legends, map instructions, and sample maps are in the series of **specimen maps and instructions for the preparation of Forest Service maps, 1907-35** (7 items). Also included are a list of tree types to be platted on maps of the Great Basin and eastern Montana; specimens for the standard 1-inch-to-2-mile and 1-inch-to-4-mile maps of national forests; a booklet giving conventional signs, legends, and forms for Forest Service administrative maps; a printed handbook for the use of engineers in Region 9, containing information about mapping and surveying, roads and trails, waterpower, and improvements; and a printed brochure entitled "Why Is a Contour?" by M.W. Talbot. The published **forest atlases, 1908-25** (173 atlases), arranged alphabetically by name of national forest, contain multisheet maps of individual national forests. Included in each atlas are maps showing vegetation, stands of commercial timber, grazing information, mining areas and claims, and species of trees.

**95.42** Among the other cartographic materials produced by the Division of Engineering are published **maps of forest reserves** (2 items), specifically Ashland Forest Reserve, OR, and Pikes Peak Forest Reserve, CO. These maps are undated, but use of the term "Forest Reserves" was officially dropped in 1907. Published **maps of Forest Service regions, 1911-40** (44 items), formerly called districts, show national forests, parks and monuments, Indian reservations, Forest Service regional headquarters, supervisors' offices, and district rangers' offices as well as county seats, lines of public surveys, and roads; a few show kinds of trees. The maps, arranged by region number and thereunder chronologically by date of publication, were prepared in the local district or regional offices.

**95.43** Also prepared in regional offices are **maps of national forests, 1911-60** (2,050 items), showing the national forest boundaries, State and county boundaries, game and bird refuges, primitive areas, roads and their condition, trails, telephone and railroad lines, forest supervisors' headquarters, ranger and guard stations, triangulation stations, camp sites, houses and buildings, and airfields. Some versions also show acquired forest lands, lands to be acquired, and purchase units. The maps are arranged alphabetically by name of national forest and thereunder chronologically by date of edition. The maps were prepared following standards devised by the Division of Engineering using scales ranging from 1-inch-to-1-mile to 1-inch-to-4-miles.

**95.44** A **map and chart relating to mapping activities in District 3, 1912-13** (2 items), provide graphic evidence of the status of surveying activities in the national forests in Arizona, Arkansas, New Mexico, and Oklahoma. The published map shows the extent of surveys of national forests and areas

where mapping was necessary; the chart lists the extent of area covered by intensive reconnaissance, the extent covered by standard surveys, the extent of area unsurveyed, and available maps--by kind--for each national forest within the region.

Records of the Division of Fire Control

**95.45** The work of fire control in the Forest Service originated in the Branch of Operation. The need for more effective control methods, however, led to the establishment in 1935 of the Division of Fire Control and Improvements, later designated simply "Division of Fire Control." The Division's **general correspondence, 1909-37** (53 ft.), includes letters, reports, and memorandums relating to administrative and technical practices in the fire-control work of the Forest Service. The records are arranged by subject, such as claims, control, cooperation, information, statistics, studies, supervision, and trespass, and generally thereunder by region.

Records of the Division of Range Management

**95.46** In 1907 a Branch of Grazing was established in the Forest Service to supervise all matters relating to the grazing of livestock on national forest ranges and range reserves. The name was changed to the Branch of Range Management in 1927, and in 1935 the Branch became the Division of Range Management.

**95.47** The **general correspondence, 1905-52** (192 ft.), of the Division and its predecessors relates to such matters as regulation of grazing on national forest ranges, general protection and development of range resources, cooperative projects, regional inspections, legislation, and administration. Included are annual reports, studies, maps, and statistical data. The records are arranged by subjects such as allowances, cooperation, permits, Service studies, supervision, surveys, trespass, and working plans. Materials filed under some of these subject headings are arranged by district and thereunder chronologically.

Records of the Division of Timber Management

**95.48** The Division of Timber Management, which replaced the Branch of Forest Management in 1935, administered several phases of work that, over the years, had been directed by various offices of the Forest Service. The Division's earliest predecessor was the Section of Working Plans, which was established about 1898 to prepare plans for practical assistance to farmers, lumbermen, and others in handling forest lands. By 1902 this Section had been superseded by an Office of Forest Management, which dealt with problems of management offered by national, State, and private forests and administered the inspection and sale of national forest timber.

**95.49** Another type of work that eventually was brought under the Branch of Forest Management was that of forest extension, which involved formulating plans for planting and nursery operations in national forests and advising private forest landowners. Work in silvics, the study of the history and characteristics of forest trees with particular reference to environmental influences, was undertaken at an early date. At first the work consisted of the coordination and classification of forestry data and the establishment of sample forest plots, but in 1907 the various units concerned with timber sales, reforestation, preparation of working plans, cooperation with States and private forest owners, and forest investigations were brought together in a Branch of Silviculture. In 1920 this Branch was changed to the Branch of Forest Management and in 1935 to the Division of Timber Management.

**95.50** **General correspondence, 1905-52** (134 ft.), relates to subjects such as insect control, disease control, planting, timber sales, legislation, forest supervision, general administrative matters, and other aspects of timber management work. Among the enclosures are reports, statistical studies, and related records. The records are arranged by subject, with the those for some subjects filed according to district or region, or alphabetically by name of correspondent.

**95.51** Records, chiefly correspondence files, are found for several of the Division's early predecessors. The **correspondence of the Office of Forest Extension, 1899-1908** (20 ft.), concerns the activities of planting stations and nurseries, the itineraries of fieldmen, appointments, and authorizations. These are arranged chiefly by name of correspondent but in some instances by subject. Some requisitions issued by the Chief of Forest Extension are mentioned in 95.77.14. The **correspondence of the Office of Forest Management, 1901-9** (4 ft.), concerns woodlot examinations, cooperative projects, and administrative matters such as personnel, supplies, and accounts. The records are arranged alphabetically by name of field agent.

**95.52** Cooperative programs were administered by two offices in the Branch of Silviculture. The **records of the Office of State and Private Cooperation, 1896-1908** (3 ft), are arranged alphabetically by name of correspondent and, in some instances, by State and include correspondence and reports dealing with the examination of timberlands and the preparation of work plans for their management. Forestry work conducted in conjunction with other Federal agencies is documented in the **correspondence of the Office of Federal Cooperation, 1908-11** (7 ft.). These records primarily relate to the Forest Service management of Indian timberlands, 1908-9, under a short-lived agreement with the Office of Indian Affairs, Department of the Interior. Some of the correspondence specifically concerns defining the cooperative agreement, but most of it pertains to general timber operations and related work. In 1909 it was estimated that Indian lands contained about 12 million acres of timber. Besides logging and timber sales, the Forest Service was concerned with improving yield and extinguishing fires as well as with the Indian labor needed to carry out its programs. Information about work plans, expenditures, contracts, trespasses, the disposition of dead timber, and the condition of the forests is also included in this correspondence.

**95.53** Several ledgers and press copies of letters sent documenting timber-sale activities of the General Land Office, Department of the Interior, constitute the **records relating to timber sales, 1898-1905** (42 vols., 5 ft.), arranged chronologically. A similarly titled series, **records relating to timber sales, 1908-37** (38 ft.), documenting the activities of the Forest Service, is arranged by region and thereunder by national forest. These records consist of correspondence, memorandums, circulars, maps, and statistics concerning such subjects as timber cut and sold, sale and cutting policies, legal questions, contracts, timber prices, and requests for cutting permits.

**95.54** Similar **records relating to timber sales in the Black Hills National Forest, 1898-1912** (3 ft.), constitute a separate series. Correspondence, reports, and applications, arranged alphabetically by name of applicant, relate to the purchase and cutting of timber in the forest.

**95.55** Surveys undertaken in national forests to accumulate information on conditions in timber areas are the subject of **records relating to timber surveys, 1908-30** (8 ft.). The correspondence, memorandums, reports, maps, and statistics constituting these records also provide information on the topography of the areas surveyed. The records are arranged by region and thereunder by national forest.

**95.56** Among the separately maintained cartographic records are the **project files of the drafting and atlas section** of the Division. These records consist of manuscript, photoprocessed, and published maps, graphs, charts, and related data, prepared for use in publications, as illustrations for exhibits or talks given by Forest Service personnel, and for the use of other Forest Service Divisions. Most of the files contain either general undated materials or materials relating to the post-1912 period. The files containing pre-1913 materials are listed below:

File A-24. A chart showing total number of stock grazed yearly under paid permit from 1908 to 1937; and a diagram showing native shrubs and herbaceous plants as indicators of potential natural timber belts in Ephraim Canyon, Manti National Forest, UT.

File A-25. Charts showing consumption of jack and southern pine for pulpwood yearly from 1916 to 1940 and firewood consumption by decade, region, and kind of tree from 1630 to 1930.

File A-35. A map of the United States showing farm woodlots by county in 1910; and a chart showing the size of the average farm in each woodlot region in 1880 and in 1910.

File A-62. Charts relating to the sawtimber stand in the United States from 1630 to 1930, including a chart showing its drain, the contrast between its drain and growth, and the regional balance of its growth and destruction.

File C-35. A panel of maps of the United States showing virgin forest lands in 1620, 1850, and 1926; and a panel of maps showing virgin forest in 1942 and the remaining stands of original sawtimber in 1850 and 1930.

Records of the Division of Land Acquisition

**95.57** Various administrative units of the Forest Service have been responsible for the development, formulation, and execution of programs of land acquisition for national forests through purchase, exchange, donation, and transfer. After the Weeks Law of 1911 provided for the purchase of private lands to be added to national forests, a Branch of Acquisition handled the work. In 1920 the function was transferred to the Branch of Lands, which had been established in 1908 to replace the Office of Lands in the

Branch of Operation. This Branch already had general supervision over all matters relating to the application of public land laws to national forest lands and the use of such lands for purposes other than timber sales and grazing. In 1935 the Branch was abolished and its functions divided between the Division of Recreation and Lands and the division that eventually became the Division of Land Acquisition.

**95.58** The **general correspondence, 1901-40** (27 ft.), of the Division of Land Acquisition relates to examinations, valuations, and surveys of lands; legislation pertaining to boundaries, appropriations, claims, exchanges, grants, game refuges, mining, rights-of-way, public land uses, roads, and repeal of the Timber and Stone Act of 1878; project plans and reports; and questions and requests from private citizens about the sale, purchase, appraisal, or lease of lands by the Forest Service. These records are arranged alphabetically by subject.

**95.59** In 1924 the Northern Pacific Railroad claimed the right to select within the indemnity limits of its 1864 grant approximately 2,600,000 acres of land for lands lost in the primary limits of its 1864 grant. The lands that the railroad wished to select had been withdrawn in the intervening years and added to national forests in Wyoming, Montana, Idaho, and Washington. The **records relating to the Northern Pacific land-grant suit, 1906-40** (12 ft.), include correspondence, statistics, maps, studies, reports, minutes, briefs, and court decisions relating to the congressional hearings, the court trials, and Forest Service activities connected with this case.

Records of the Division of Recreation and Lands

**95.60** The Division of Recreation and Lands was established in 1935 as one of the successors of the abolished Branch of Lands. From the Branch the Division inherited responsibility for supervising the use of forest lands for purposes other than timber and grazing. The records of the Division consist of general correspondence, various materials concerning homestead cases, and land classification folios and maps.

**95.61** The Division's file of **general correspondence, 1906-51** (67 ft.), is arranged by subjects, such as adjustments, classification, plans, recreation, and uses. Records filed under these headings are usually arranged by region, but some records for the years 1906-11 are arranged by name of correspondent. Correspondence forms the chief component of the file, but reports, maps, and other papers relating to mining claims, special uses, settlement, trespass, claims, boundaries, contracts, and administration are included.

**95.62** Correspondence, reports, and maps concerning homestead grants in national forests make up the **records relating to homestead cases, 1909-37** (4 ft.). The grants were made under the provisions of the Forest Homestead Act of 1906, which opened agricultural lands within the forest reserves to settlement, provided that private ownership did not interfere with development of the forests. Most of these records are arranged alphabetically by name of national forest and thereunder by name of applicant for settlement, but the series also includes a few general State files as well as several files relating to the "Big Creek claims," involving lands in Idaho, and one file concerning the "Palisade Case" in Oregon. The State files are for California, Idaho, New Mexico, Oregon, Utah, and Washington. Case files are for the following national forests: Arapaho, Bighorn, Black Hills, Cochetopa, Grand Mesa, Gunnison, Harney, Holy Cross, Leadville, Montezuma, Pike, Rio Grande, Roosevelt, Routt, San Isabel, San Juan, Shoshone, Uncompahgre, Washakie, and White River.

**95.63** The separately filed cartographic records include **maps of national forests annotated to show lands withdrawn for ranger stations, 1906-18** (150 items). The extensive marginal annotations give the dates of withdrawals, the exact location of each withdrawal in terms of public land descriptions, and revocations, if any, of the withdrawals. The maps are arranged alphabetically by name of forest. Arranged in a similar fashion are detailed reports called **land classification folios of national forests, 1908-42** (131 items). Illustrated with maps and photographs on land classification and forest boundaries, the reports include intensive surveys of special areas and project areas within several of the forests. Most reports contain information about the history, topography, climate, soils, agricultural values, land classification, land titles, land values, waterpower, recreation facilities, and grazing within the forests or parts of the forests, with related maps showing--by township--tree types, other vegetation, barren and burned lands, possible agricultural lands, listed and patented lands, withdrawals, entries by type, allotments, and selected lands. The boundary data, which are not included in all the reports, contain textual descriptions of the boundaries, with remarks on additions, deletions, and recommendations for changes and maps showing past,

present, and proposed boundaries. Some of the reports include additional reports and maps from detailed surveys of special or project areas--mainly surveys of soil types within these areas.

### Records of the Division of Lands

**95.64** When the Branch of Lands was abolished in 1935, its functions were divided between the Division of Recreation and Lands and a unit that eventually became the Division of Land Acquisition. In 1954 the Division of Land Acquisition was replaced by a Division of Lands and a Division of Land Utilization. Two years later these two units were consolidated to form the Division of Lands, which was redesignated the Division of Land Adjustments in 1957. The records described below were inherited by the Division of Lands from some of its predecessor units.

**95.65 Correspondence and other records, 1907-48** (19 ft.), consist of letters received and copies of letters sent, memorandums, statistical tabulations, maps, press clippings, legislation, and some photographs, concerning such subjects as land-use planning, boundary adjustments, public domain lands, natural resources, parks, claims and settlements, and cooperative projects. A Miscellaneous section consists of "Special" files concerning such subjects as cooperation with the American Mining Congress; school lands; compensation to the Ute Indians for reservation lands in Colorado; a survey of the Antoine Leroux land grant, Taos National Forest; and the revision of public land laws.

## Records of the Forest Research Divisions

### Records of Miscellaneous Research Projects and Units

**95.66** The first research unit of the Forest Service was a Section of Silvics (later Office of Silvics), charged with collecting and compiling silvicultural data. In 1905 an investigative unit dealing with forest products was organized, and its work led to the establishment in 1910 of the Forest Products Laboratory at Madison, WI. The Office of Silvics was superseded by the Office of Forest Investigation in 1913. In 1915 the various phases of research in the Forest Service were brought together in a Branch of Research; 20 years later they were dispersed once again, divided among divisional units that were authorized to initiate or continue investigations relating to forest management, protection, economics, influences, and products. An Assistant Chief administered the overall activities of these divisions. Records described below (95.67-95.71) either originated in earlier research units or relate to early research projects. Unless otherwise indicated, the records are arranged alphabetically by name of correspondent. Some additional materials are found in several files listed in 95.77.

**95.67** Correspondence files exist for several offices. **Correspondence of the Office of Measurements, 1902-10** (1 ft.), relates to timber estimates, scaling, mapmaking, valuation surveys, volume tabulations, and the work of field parties. **Correspondence of the Office of Forest Statistics, 1909** (6 in.), concerns the production value of timber in various regions. Wood utilization and preservation are two of the subjects covered by the letters, memorandums, and reports constituting the **correspondence of the Office of Products, 1912-23** (7 ft.). Cartographic records for this Office, filed apart from the textual records, include printed **maps of the United States showing the production and consumption of lumber and lumber products, 1909-12** (3 items), compiled by the Office of Geography. Two maps dated 1909 and 1910, respectively, show the production of lumber by kind and by State; the third item, dated 1911, consists of a panel of 14 maps showing States producing lumber and lumber products.

**95.68 Correspondence of the Office of Silvics, 1907-13** (5 ft.), relates to various types of forest investigations and to requests for forestry information and publications, while **memorandums, 1907-12** (3 in.), contain information about the general work of the Office. **Correspondence relating to cut-over lands, 1907** (3 in.), consists of letters and reports from forest supervisors containing information about national forest areas in which extensive logging operations had occurred and the possibility of reforesting those areas.

**95.69** Some experiments and numerous scientific investigations are documented by correspondence and reports. **Records relating to a rain-producing experiment, 1892** (2 in.), include correspondence, pamphlets, and newspaper clippings about an attempt to produce rain by explosions that was conducted under the general supervision of the Division of Forestry. In 1902 the Bureau of Forestry began a comprehensive study of the use of basket willows in reforestation. By 1907 this study had led to the establishment of willow holts and to the free distribution

of willow cuttings. **Correspondence relating to basket willow investigations, 1907-17** (3 ft.), consists chiefly of requests for information regarding the use and adaptability of the basket willows and for cuttings. In 1909 a program was begun using voluntary observers to obtain information on the time of leafing, flowering, and fruiting of forest trees. The records constituting the **correspondence relating to phenological observations, 1911-13** (5 in.), include letters and reports recording the observations of the volunteers. Annual progress reports of research programs and plans for each region, arranged chiefly by region, constitute the series **reports of research investigations, 1912-33** (12 ft.).

**95.70** A massive **research compilation file, 1897-1935** (192 ft.), arranged by subject, contains correspondence, reports, publications, and memorandums, relating to various phases of forest description, management, production, research, organization, and utilization. Finding aids are available for this file, including an undated **index to the research compilation file** (7 ft.), arranged alphabetically by such subjects as Administration, Auxiliary Services, Description and Resources, Economics, Education, Forestation, History, Investigations, Legislation and Policies, Management, Mensuration, Mensuration--Log Rules, Protection, Soil and Soil Erosion, Tree Studies, Types, Utilization, and Valuation. The file was established as a central repository for material, either created or received by the Forest Service, that contained important silvical information.

**95.71** Statistical reports, correspondence, and other papers relating to the pulpwood and paper industry; lumber, lath, and shingle production; timber estimating; and the Tariff Act of 1909 form a series called **miscellaneous records, 1901-26** (2 ft.). A collection of **newspaper clippings, ca. 1890-1940** (1 ft.), relates to various forestry subjects.

Records of the Division of
Forest Management Research

**95.72** The Division of Forest Management, redesignated the Division of Forest Management Research in 1954, inherited records from such predecessor units as the Divisions of Silvics, Dendrology and Forage Investigations, and Forest Management. One of these series is an undated **card file** (1 ft.), consisting of 5- by 8-inch note cards providing information on the topography, soils, climate, and trees in the States and counties of the United States. The cards are filed by State and thereunder by county. A series of **"range notes" on national forests, 1904-12** (8 in.), compiled on 5- by 8-inch sheets, lists the location, by State and national forest, of various tree species occurring in the national forests. The information was compiled from silvical reports. The notes are arranged in two alphabetical segments: by botanical name of tree and by name of State. The notes also include the names of the observers, the dates of observation, and in some cases descriptions of the topography, climate, and other features of the tree's environs. **Volume tables, ca. 1901-40** (6 ft.), indicate mensurate quantities, such as age, spacing, height, diameter, and number of trees per acre. The tables are arranged alphabetically by type of tree studied.

**95.73** Cartographic records from one of the predecessor units, the Division of Silvics, include **maps illustrating dendrologic investigations, 1907-13** (12 items). These consist of printed maps with texts pertaining to the distribution of turpentine resources and the basket willow in North and South America, 1907-11; and the *Forest Atlas*, Part 1, containing 36 maps of North America showing the distribution of pines.

Records of the Division of
Range Management Research

**95.74** Problems concerning depleted or unproductive grazing lands and river basin lands were handled before 1935 by the Branches of Grazing and Dendrology and thereafter by the Division of Range Research, with the assistance from 1942 until 1954 of the Division of Dendrology and Forage Investigations. In 1954 the newly established Division of Range Management Research replaced these divisions. The **general correspondence and reports, 1909-54** (20 ft.), described here were inherited from the predecessor units. Arranged by subject, the records relate chiefly to range plant identification but also to research programs, artificial revegetation, and general administrative matters.

Records of the Division of
Forest Insect Research

**95.75** Research involving the control and eradication of insects was carried on originally by the Division of Entomology, established in the Department of Agriculture in 1863. From 1904 until 1934 this unit was called the Bureau of Entomology; in

1934 it was consolidated with the Bureau of Plant Quarantine and called the Bureau of Entomology and Plant Quarantine. At that time numerous units within the Bureau were given divisional status, one being the Division of Forest Insects, later redesignated the Division of Forest Insect Investigations. When the Bureau was abolished in 1953, this Division was transferred to the Forest Service. At first designated the Division of Forest Insect Research and Forest Disease, it later became the Division of Forest Insect Research.

**95.76** Among the materials inherited from the Bureau of Entomology and Plant Quarantine is a series of **miscellaneous records, 1909-53** (9 ft.), consisting of correspondence, reports, newspaper clippings, press releases, circular letters, notes, and other records concerning research and surveys, work projects, forest insect conditions, administration, finance, legislation, cooperation with other agencies and organizations, meetings, and other subjects. Also available are **reports, 1912-53** (17 ft.), arranged by type. Included are reports of the Chief of the Division, informal station reports, quarterly reports, annual reports, and special progress reports.

MISCELLANEOUS RECORDS

**95.77** This group of **miscellaneous unidentified records, 1870-1966** (34 ft.), contains several volumes and files particularly relevant to this guide. Although some of these items have already been referred to, they are listed below with previously unmentioned files in the order in which they are distributed throughout the collection.

**1**. Division of Forestry, press copies of requisitions, 1899 (1 vol.), and authorizations, 1896-98 (1 vol.).

**2**. Ledger showing supplies disbursed to the Washington office and field offices, 1902-3 (1 vol.).

**3**. Forestry reports and memorandums, 1899-1904 (2 folders). Included is an undated carbon copy of a "Report on the Big Trees of California," probably the basis for the publication *Big Trees of California* (1900), which was also issued as Bulletin 28.

**4**. Miscellaneous orders and memorandums, 1899-1904 (1 folder).

**5**. Correspondence relating to the proposed Wichita buffalo range, 1905-6 (1 folder), and specifications for the Wichita buffalo range, undated (1 folder). The specifications are for the erection of a hay barn and for the construction of a fence and yards for enclosing buffalo.

**6**. General correspondence, 1891-1915 (1 folder). Included are comments from individuals in the various States and Territories responding to a survey on the influence of windbreaks and timber belts on crop production. Also included is a list of names and addresses of persons who planted trees under the Timber Culture Act, arranged by State and Territory.

**7**. Letters received by Chief Bernhard E. Fernow, 1897 (2 folders).

**8**. Regulations and instructions, 1910-15 (5 folders).

**9**. Newspaper clippings, 1907-8 (3 folders).

**10**. Records relating to tree planting, 1903-6 (1 folder). Included is information relating to California, Colorado, New Mexico, Oklahoma, and Texas.

**11**. Correspondence relating to inspectors, 1908 (1 folder).

**12**. Records relating to forest reserves, 1903-6 (1 folder). States represented include California, Colorado, Kansas, Montana, Nebraska, and New Mexico.

**13**. Letters received concerning tree plantings, 1888-97 (14 folders), arranged alphabetically by surname of correspondent.

**14**. Office of Forest Extension, requisitions, 1905-6 (4 folders).

**15**. Silviculture files, 1896-98, consisting of reports from experiment stations concerning the status of plantings (5 folders) and reports on various species (2 folders). States represented include Arizona, California, Colorado, Iowa, Kansas, Minnesota, Montana, Nebraska, North Dakota, South Dakota, Texas, and Utah.

**16**. Six bound volumes, including field notes on basket willows, 1912 (1 vol.); "Forestry Seeds To Be Charged to Within Acct." (1 vol.); "Nursery Stock Acct." (1 vol.); and a record of a tree planting experiment, 1896 (1 vol.). This last record contains a brief explanation of the nature of experiments initiated at experiment stations in Colorado, Kansas, Nebraska, and South Dakota; stations in Minnesota and Utah were added in 1897.

**17**. Correspondence and congressional documents, 1912-14 (1 folder), concerning lands in Yosemite National Park.

**18**. Correspondence of the Secretary of Agriculture and the Attorney General concerning timber trespass cases, 1905-8 (1 folder).

**19**. Olympic Forest Reserve, report on personnel matters, 1906 (1 folder).

**20.** Monthly reports submitted by Everett B. Thomas, Forest Supervisor, April 30, 1903-March 31, 1905 (1 folder). Annotations show the reports were filed in 1906 as exhibits 56 to 76 in Case No. 2239, U.S. District Court, Southern District of California, Southern Division. Exhibit 73 is missing.

**21.** Statehood bill, undated memorandums concerning facts about land grants for educational purposes in proposed States of Oklahoma and Arizona (1 folder).

**22.** Colorado school lands, 1905-6 (1 folder).

**23.** Supervision, Santa Rosa National Forest, 1910-11 (1 folder).

**24.** Supervision, complaints about the management of forests in Colorado, Kansas, and South Dakota, 1911 (1 folder).

**25.** "Supervision, General: Early Opposition, Sentiment, Complaints, and Claims," 1900-12 (3 folders). Correspondence and other documents regarding complaints against Forest Service management of national forests in Colorado and Wyoming. Includes a copy of "Proceedings of Meeting of Forestry Committee of Denver Chamber of Commerce, September 16, 1908."

**26.** Trespass Dockets, 1901-5 (2 vols., 4 in.). The entries in each volume are arranged by case number, 1-178 and 179-383, and indexed by name. Entries give names of trespasser and purchaser; reserve; land district; land description; nature, dates, and file numbers of communications involved; value and amount of timber; damages due the government; proposition of settlement; and miscellaneous letters written (date, addressee, remarks).

## GENERAL CARTOGRAPHIC AND PHOTOGRAPHIC RECORDS

### Cartographic Records

**95.78** The general cartographic records described below belong to a mass of records that were transferred from the Forest Service without identification as to their origin within the organizational framework of that agency. The cartographic records have been arranged and are described in series according to subject matter.

**95.79** Published **maps of the United States and parts thereof showing national forests, 1908-55** (35 items), show locations of national forests, Forest Service districts or regions and regional headquarters, and forest products laboratories; some editions also show State forests, Indian reservations, Bureau of Reclamation project areas, national parks and monuments, and Forest Service purchase areas and those areas in which purchases were to be authorized by special acts of Congress. A 1908 edition also shows the amount of lumber cut in each region in 1906.

**95.80 Presidential proclamations, Executive orders, and maps relating to the establishment of and changes in forest reserves and national forests, 1891-1915** (ca. 1,350 items), is a two-part series. The first part consists of volumes of printed proclamations or orders dated from 1891 to March 1, 1907, arranged chronologically. Of these, the proclamations and orders dated from 1891 to October 3, 1905, are accompanied by printed base maps annotated to show boundaries of the forest as established by or changed by the proclamations or orders, and those dated after October 3, 1905, are accompanied by printed maps incorporated with the documents. The second part of the series consists chiefly of printed documents and related maps dated since March 2, 1907, arranged alphabetically by name of national forest and thereunder chronologically by date of document. A few proclamations and maps relating to national parks are included.

**95.81 Manuscript maps showing selections for the Minnesota Forest Reserve, 1903** (3 items), consist of two versions of a map showing first selections for the forest reserve and a map showing lands withdrawn pending final selections for the reserve. These maps were compiled in the Bureau of Forestry of the Department of Agriculture.

**95.82** A volume labeled **"Old Statistical Diagrams 1908 to 1913," 1919** (1 item), contains 57 maps, charts, and tables providing the following information about national forests: the annual costs for administering each, the number of permits issued for special uses of forest lands, settlements by kind, receipts from uses and settlements, damages caused by forest fires, distribution of commercial trees and the amount and value of cut lumber, kinds of employment on forest lands, trespassers, and the dates of establishment of each forest.

**95.83** Among the **land classification maps, 1908-49** (22 items) are three versions--two manuscripts and one published--of a map of North America, ca. 1908, showing absolute forest, agricultural, grazing, and barren lands. Also included is a panel of maps of the United States showing national forests in 1895, 1900, 1905, 1910, 1915, and 1940, prepared for a study of forest land classification.

**95.84 Maps of the North-Central and Northwestern United States showing the development of Territorial and State boundaries** (4 items), consist of base maps annotated to show the boundaries as described in Henry Gannett, *Boundaries of the United States* (3d ed., U.S. Geological Survey Bulletin 226, 1904). Maps showing boundaries and proposed boundaries of national parks and monuments, ca. 1911-39 (18 items), include a map of Sequoia National Park, CA, ca. 1911, annotated to show the boundary extension proposed by the Sierra Club, park administrative sites, easements, rights-of-way, patented and pending lands, timber and mineral entries, State selections, and reconveyances.

**95.85 Maps showing forest regions and the distribution of individual species of trees, 1910-48** (23 items), are arranged by area and consist of one published and one annotated map of the United States showing forested areas, published maps of the United States showing original timber regions and forests by major tree species, and published maps of States and parts of States showing major tree species.

**95.86** Photoprocessed copies of **right-of-way maps, ca. 1890-1913** (1,200 items), arranged alphabetically by name of national forest, show railroads, telephone and telegraph lines, canals, ditches, and reservoirs crossing national forest lands. Also found are manuscript, annotated, and published **maps of Federal game preserves within national forests, 1904-29** (32 items), filed by districts, and **maps of Indian reservations showing forest classifications, 1903-20, 1942** (58 items).

**95.87** Undated **maps of national forests in Washington showing information about vacant public lands** (5 items) are described with the general cartographic materials because they cannot easily be assigned to any of the divisional records described previously. Actually, the maps are filed with the cartographic records of the National Forest Planning and Establishment Division and consist of base maps annotated to show vacant public lands outside land districts affected by the classification act of February 26, 1895, those within land districts affected by this act, and those classified as nonmineral. Also filed with the Division's cartographic records are **maps pertaining to boundary studies of the Cochetopa National Forest, CO, 1910 and 1921** (8 items). The maps dated 1910 show boundary changes, proposed changes, and tree types; those dated 1921, show areas involved in Ute Indian claims, recommended additions to the forest, and Forest Service facilities.

Photographic records

**95.88** Photographs, 1897-1965 **(G)**, constituting a file referred to by the Forest Service as the Permanent Image Collection, were taken by Forest Service employees and others during the course of fieldwork. Shown are such subjects as land features, types of trees and other plants, wildlife, and the effects of plant diseases, research activities, forestry techniques, and forest and land management. Specialized photographs show timber types and flower specimens in various stages of growth and development. Also included are images relating to the recreational and commercial uses of forest lands and images of rural life. Images from this file are reproduced as National Archives Microfilm Publication M1127. Also available, as microfilm publication M1128, is the "Photographic Record," a reproduction of field notes and forms maintained by the Forest Service as a source of caption information. Information provided includes the name of the author (photographer); the date the negatives were submitted for filing; the date the picture was taken; the location where the picture was taken; and a description of the view.

**95.89** The effects on forests of fires, mining, soil erosion, and other hazards are documented in albums of photographic prints taken by George B. Sudworth, John G. Jack, H.B. Ayres, John B. Leiberg, and others in forest reserve areas in Arizona, California, Colorado, Idaho, Montana, Oregon, South Dakota, and Wyoming during the period 1898-1900 **(FRA, FRB, FRC, FRD, FRE, FRF, FRG, FRH)**. Albums of photographic prints taken by Stanton G. Smith, 1904-31 **(FP)**, document the activities of Forest Service field parties, and another album of photographs records forestry activities and logging operations, 1897-1907 **(M)**. Also available is a 1907 photograph **(TR)** showing President Theodore Roosevelt and Forester Gifford Pinchot aboard the steamer *Mississippi* during a trip down the Mississippi River, sponsored by the Inland Waterways Commission. The photograph is accompanied by an unsigned letter written by Pinchot in December 1945 explaining the photograph and the occasion.

## RECORDS MAINTAINED IN THE FIELD

**95.90** Records of Forest Service field offices, in quantities ranging from 2 to more than 1,000 cubic

feet, are held by all of the National Archives regional archives, but only three of them count pre-1913 materials among their holdings. Among the records of Forest Service Region 2 (Rocky Mountain Region), in the custody of the National Archives--Rocky Mountain Region in Denver, are **historical files, 1900-82**, for some national forests in Colorado, Nebraska, and Wyoming. Included are manuscript materials and correspondence relating to Len Shoemaker's "Saga of a Forest Ranger: A Biography of Wm. A. Kreutzer Forest Ranger No. 1 and a Historical Account of the U.S. Forest Service in Colorado." Most items in these files originated after 1912, but some, like the Kreutzer biography, contain information concerning the pre-1913 period. Also included in the collection are files that contain information concerning the following national forests: Black Hills, Cochetopa, Grand Mesa, Gunnison, Leadville, Medicine Bow, Montezuma, Nebraska, Pike, Rio Grande, Roosevelt, Routt, San Isabel, San Juan, Uncompahgre, and White River, as well as Rocky Mountain National Park. Available also are **range allotment management files, 1910-54**, for Arapaho and Roosevelt National Forests.

**95.91** The National Archives--Pacific Sierra Region in San Bruno, CA, has custody of the **central files** that were maintained at Humboldt, Klamath, Lassen, Plumas, Sequoia, Shasta-Trinity, Sierra, Six Rivers, Stanislaus, Tahoe, and Toiyabe National Forests. These files, arranged according to the Forest Service alpha filing system, typically span a time period from about 1905 to 1950, although in some cases earlier records are available. The relatively small volume of pre-1913 materials contained in the files is interfiled with the bulk of more recent records. The pre-1913 records primarily concern land matters and grazing permits; records relating to other subjects, such as mining claims, planting areas, special use permits, and surveys of timber and cut-over areas, are sometimes available. The records of Forest Service Region 5 (Pacific Southwest Region), include **land status tabular records, 1870-1970**, and related **ledgers of General Land Office plats** (22 vols.). These plats, which were created in the 1930's, are annotated to show land patents, ownership, and use in the forests cited above (except Humboldt, Plumas, and Toiyabe), as well as in the following forests: Angeles, Cleveland, Eldorado, Inyo, Los Padres, Mendocino, Modoc, and San Bernardino. Some of the data recorded on the plats and tabular records dates from the 1870's.

**95.92 Inspection reports and/or administrative audits, 1901-16**, from District 6, Portland, OR, are included in the records of Forest Service Region 6 (Pacific Northwest Region) held by the National Archives--Pacific Northwest Region in Seattle, WA. Among the reports and audits are one or more reports for the following areas: Blue Mountains, Cascade, Chelan, Columbia, Colville, Crater, Deschutes, Fremont, Malheur, Ochoco, Okanogan, Olympic, Oregon, Rainier, Santiam, Siskiyou, Siuslow, Snoqualmie, Umatilla, Umpqua, Wallowa, Washington, and Wenaha. Inspection reports from District 1, Missoula, MT, are available for several national forests, including Coeur d'Alene, Gallatin, Lewis and Clark, and St. Joe, among others. Some **homestead applications filed under the Forest Homestead Act of June 11, 1906,** are available for the following forests: Bitterroot, Challis, Kaniksu, Kootenai, and Malheur. Also available are reports on meetings of regional foresters and National Forest supervisors, 1910-50; reports on the status of lands in the former Crater National Forest, ca. 1906-29; and a few reports on timber management in the Challis and Targhee National Forests. Other records include an incomplete set of "The Siskiyou Bulletin," 1909-33; a newsletter issued by the staff of the Siskiyou National Forest; records of sand dune plantings, 1910-16, at the Siuslaw National Forest; and a few grazing permits from some of the forests in Idaho.

## TABLE A - 95.9
## List of District Offices and National Forests
## 1908-13

The dates given relate to use of the name indicated, not to the status of the national forest

| Name | Location |
|---|---|
| DISTRICT 1<br>Montana, northeastern Washington, northern Idaho, northwestern, South Dakota, northern Minnesota, southwestern North Dakota (and northern Wyoming, moved to District 2 in 1909) | Missoula, MT |
| Absaroka (1902-3; 1908-45) | MT |
| Beartooth (1908-32) | MT |
| Beaverhead (1908- ) | MT/ID |
| Bighorn (1898- ) | WY (to District 2, 1909) |
| Bitterroot (1898- ) | MT |
| Blackfeet (1908-35) | MT |
| Cabinet (1907-54) | MT |
| Clearwater (1908- ) | ID |
| Coeur d'Alene (1906- ) | ID |
| Custer (1908- ) | MT |
| Dakota (1908-17) | ND |
| Deerlodge (1908- ) | MT |
| Flathead (1898- ) | MT |
| Gallatin (1899- ) | MT |
| Helena (1906- ) | MT |
| Jefferson (1908-32) | MT |
| Kaniksu (1908- ) | WA/ID |
| Kootenai (1906- ) | MT |
| Lewis and Clark (1898- ) | MT |
| Lolo (1906- ) | MT |
| Madison (1902-31) | MT |
| Minnesota (1908-28) | MN |
| Missoula (1906-31) | MT |
| Nezperce (1908- ) | ID |
| Pend Oreille (1908-33) | ID |
| St. Joe (1911- ) | ID |
| Selway (1911-34) | ID |
| Shoshone (1908- ) | WY (to District 2, 1909) |
| Sioux (1908-20) | SD/MT |
| Superior (1909- ) | MN |

| Name | Location |
|---|---|
| DISTRICT 2<br>Colorado, southern Wyoming, South Dakota, Nebraska, western Kansas (and northern Wyoming added in 1909) | Denver, CO |
| Arapaho (1908- ) | CO |
| Battlement (1908-24) | CO |
| Bighorn (1908- ) | WY (from District 1, 1909) |
| Black Hills (1898-19) | SD |
| Bonneville (1908-16) | WY (from District 4, 1909) |
| Bridger (1911-23; 1941- ) | WY |
| Cheyenne (1908-10) | WY (became Medicine Bow) |
| Cochetopa (1905-45) | CO |
| Colorado (1910-32) | CO (was Medicine Bow) |
| Durango (1911-20) | CO |
| Garden City (1905-8) | KS |
| Gunnison (1905- ) | CO |
| Harney (1911-54) | SD |
| Hayden (1908-29) | WY/CO |
| Holy Cross (1905-45) | CO |
| Kansas (1908-15) | KS |
| Las Animas (1907-10) | CO |
| Leadville (1905-30) | CO |
| Medicine Bow (1905-10) | CO (became Colorado) |
| Medicine Bow (1910- ) | WY (was Cheyenne) |
| Montezuma (1905-47) | CO |
| Nebraska (1908- ) | NE |
| Pike (1892-19 ) | CO |
| Rio Grande (1908- ) | CO |
| Routt (1908- ) | CO |
| San Isabel (1902- ) | CO |
| San Juan (1905- ) | CO |
| Shoshone (1908- ) | WY (from District 1, 1909) |
| Sopris (1909-20) | CO |
| Sundance (1908-15) | WY |
| Uncompahgre (1905- ) | CO |
| Washakie (1911-45) | WY |
| White River (1891- ) | CO |
| DISTRICT 3<br>Arizona, Arkansas, Florida, New Mexico, and Oklahoma | Albuquerque, NM |
| Alamo (1908-17) | NM |
| Apache (1908- ) | AZ |

| Name | Location |
|---|---|
| Arkansas (1907-26) | AR |
| Carson (1908- ) | NM |
| Chiricahua (1902-17) | AZ/NM |
| Coconino (1908- ) | AZ |
| Coronado (1908- ) | AZ |
| Crook (1908-53) | AZ |
| Datil (1908-31) | NM |
| Garces (1908-11) | AZ |
| Gila (1905- ) | NM |
| Jemez (1905-15) | NM |
| Lincoln (1902- ) | NM |
| Magdalena (1906-9) | NM |
| Manzano (1906-31) | NM |
| Ozark (1908- ) | AR |
| Pecos (1908-15) | NM |
| Prescott (1908- ) | NM |
| Sitgreaves (1908- ) | AZ |
| Tonto (1905- ) | AZ |
| Tusayan (1910-34) | AZ |
| Wichita (1901-36) | OK |
| Zuni (1909-14) | NM/AZ |
| DISTRICT 4<br>Utah, southern Idaho, western Wyoming, northwestern Arizona, eastern Nevada (and central Nevada, added in 1910) | Ogden, UT |
| Ashley (1908- ) | UT/WY |
| Boise (1908- ) | ID |
| Bonneville (1908-16) | WY (to District 2, 1909) |
| Cache (1908- ) | UT/ID |
| Caribou (1907- ) | ID/WY |
| Challis (1908- ) | ID |
| Dixie (1905- ) | UT/AZ |
| Fillmore (1906-23) | UT |
| Fishlake (1899-19 ) | UT |
| Humboldt (1908- ) | NV |
| Idaho (1908-44) | ID |
| Kaibab (1908- ) | AZ |
| La Sal (1906-49) | UT/CO (LaSalle, July 1908 to March 1909) |
| Lemhi (1906-38) | ID |
| Manti (1906-50) | UT |
| Minidoka (1908-53) | ID/UT |

| Name | Location |
|---|---|
| Moapa (1908-15) | NV |
| Nebo (1908-15) | UT |
| Nevada (1909-57) | NV |
| Palisade (1910-17) | ID/WY |
| Payette (1905-44) | ID |
| Pocatello (1903-15) | ID/UT |
| Powell (1908-45) | UT |
| Ruby (1912-17) | NV |
| Salmon (1908- ) | ID |
| Santa Rosa (1911-17) | NV |
| Sawtooth (1905- ) | ID |
| Sevier (1905-22) | UT |
| Targhee (1908- ) | ID/WY |
| Teton (1908- ) | WY |
| Toiyabe (1907-32; 1938- ) | NV |
| Uintah (1898-1910) | UT/WY (became Uinta) |
| Uinta (1910- ) | UT |
| Wasatch (1906- ) | UT |
| Weiser (1905-44) | ID |
| Wyoming (1908-41) | WY |
| DISTRICT 5<br>California and southwestern Nevada | San Francisco, CA |
| Angeles (1908- ) | CA |
| California (1908-32) | CA |
| Cleveland (1908- ) | CA |
| Diamond Mountain (1905-8) | CA |
| Eldorado (1910- ) | CA/NV |
| Inyo (1907- ) | CA/NV |
| Kern (1910-15) | CA |
| Klamath (1905- ) | CA |
| Lassen (1905- ) | CA |
| Modoc (1904- ) | CA |
| Mono (1908-45) | NV/CA |
| Monterey (1906-19) | CA |
| Plumas (1905- ) | CA |
| San Luis (1908-10) | CA |
| Santa Barbara (1903-36) | CA |
| Sequoia (1908- ) | CA |
| Shasta (1905- ) | CA |
| Sierra (1893- ) | CA |
| Stanislaus (1897- ) | CA |

| Name | Location |
|---|---|
| Tahoe (1905- ) | CA/NV |
| Trinity (1905- ) | CA |
| DISTRICT 6<br>Washington, Oregon (and a small portion of northern California, dropped in 1909) | Portland, OR |
| Cascade (1893-33) | OR |
| Chelan (1908-55) | WA |
| Columbia (1908-49) | WA |
| Colville (1907- ) | WA |
| Crater (1908-32) | OR/CA |
| Deschutes (1908- ) | OR |
| Fremont (1906- ) | OR |
| Malheur (1908- ) | OR |
| Minam (1911-20) | OR |
| Ochoco (1911- ) | OR |
| Okanogan (1911-20; 1955- ) | WA |
| Olympic (1898- ) | WA |
| Oregon (1908-24) | OR |
| Paulina (1911-15) | OR |
| Rainier (1898-33) | WA |
| Santiam (1911-33) | OR |
| Siskiyou (1906- ) | OR/CA |
| Siuslaw (1908- ) | OR |
| Snoqualmie (1908- ) | WA |
| Umatilla (1908- ) | OR |
| Umpqua (1907- ) | OR |
| Wallowa (1908- ) | OR |
| Washington (1898-24) | WA |
| Wenaha (1905-20) | WA/OR |
| Wenatchee (1908- ) | WA |
| Whitman (1908- ) | OR |

## TABLE B - 95.9
## District Offices, 1914-30, and Regional Offices, 1930-41

| Name | Location |
|---|---|
| DISTRICT 1 (Northern) | Missoula, MT |
| REGION 1 (Northern) | Missoula, MT |
| Montana, northeastern Washington, northern Idaho, and northeastern South Dakota | |
| Absaroka | MT |
| Beartooth | MT |
| Beaverhead | MT |
| Bitterroot | MT |
| Blackfeet | MT |
| Cabinet | MT |
| Clearwater | ID |
| Coeur d'Alene | ID |
| Custer | MT/SD |
| Deerlodge | MT |
| Flathead | MT |
| Gallatin | MT |
| Helena | MT |
| Jefferson (to 1932) | MT |
| Kaniksu | ID/WA |
| Kootenai | MT |
| Lewis and Clark | MT |
| Lolo | MT |
| Madison (through 1931) | MT |
| Missoula | MT |
| Nezperce | ID |
| Pend Oreille | ID |
| St. Joe | ID |
| Selway | ID |
| DISTRICT 2 (Rocky Mountain) | Denver, CO |
| REGION 2 (Rocky Mountain) | Denver, CO |
| Colorado, Kansas, eastern Wyoming, South Dakota, Nebraska (Minnesota and Michigan assigned to District 9 in 1929; and western Oklahoma dropped by mid-1935) | |
| Arapaho | CO |
| Bighorn | WY |

| Name | Location |
|---|---|
| Black Hills | SD/WY |
| Chippewa | MN (to District 9) |
| Cochetopa | CO |
| Colorado (Roosevelt-1932) | CO |
| Grand Mesa | CO |
| Gunnison | CO |
| Harney | SD |
| Holy Cross | CO |
| Medicine Bow | WY |
| Minnesota (Chippewa-1928) | MN |
| Montezuma | CO |
| Nebraska | NE |
| Pike | CO |
| Rio Grande | CO |
| Routt | CO |
| San Isabel | CO |
| San Juan | CO |
| Shoshone | WY |
| Superior | MN (to District 9) |
| Uncompahgre | CO |
| Washakie | WY |
| White River | CO |
| Wichita | OK |
| DISTRICT 3 (Southwestern) | Albuquerque, NM |
| REGION 3 (Southwestern) | Albuquerque, NM |
| Arizona and New Mexico | |
| Apache | AZ/NM |
| Carson | NM |
| Cibola | NM |
| Coconino | AZ |
| Coronado | AZ/NM |
| Crook | AZ |
| Datil | NM |
| Gila | NM |
| Kaibab | AZ (from Region 3) |
| Lincoln | NM |
| Manzano (Cibola-1932) | NM |
| Prescott | AZ |
| Santa Fe | NM |
| Sitgreaves | AZ |
| Tonto | AZ |
| Tusayan | AZ |

| Name | Location |
|---|---|
| DISTRICT 4 (Intermountain) | Ogden, UT |
| REGION 4 (Intermountain) | Ogden, UT |
| Utah, southern Idaho, western Wyoming, Nevada (and northwestern Arizona moved to Region 3 ca. 1933) | |
| Ashley | UT/WY |
| Boise | ID |
| Bridger | WY |
| Cache | ID/UT |
| Caribou | ID/WY |
| Challis | ID |
| Dixie | UT/NV |
| Fishlake | UT |
| Humboldt | NV |
| Idaho | ID |
| Kaibab | AZ (to Region 3) |
| La Sal | UT/CO |
| Lemhi | ID |
| Manti | UT |
| Minidoka | ID/UT |
| Nevada | NV |
| Payette | ID |
| Powell | UT |
| Salmon | ID |
| Sawtooth | ID |
| Targhee | ID/WY |
| Teton | WY |
| Toiyabe | NV |
| Uinta | UT |
| Wasatch | UT |
| Weiser | ID |
| Wyoming (Bridger-1941) | WY |
| DISTRICT 5 (California) | San Francisco, CA |
| REGION 5 (California) | San Francisco, CA |
| California and southwestern Nevada | |
| Angeles | CA |
| California (Mendocino-1932) | CA |
| Caliveras Bigtree | CA |
| Cleveland | CA |
| Eldorado | CA/NV |

| Name | Location |
|---|---|
| Inyo | CA |
| Klamath | CA/OR |
| Lassen | CA |
| Modoc | CA |
| Mono | CA/NV |
| Plumas | CA |
| San Bernardino | CA |
| Santa Barbara (Los Padres-1936) | CA |
| Sequoia | CA |
| Shasta | CA |
| Sierra | CA |
| Six Rivers | CA |
| Stanislaus | CA |
| Tahoe | CA/NV |
| Trinity | CA |
| DISTRICT 6 (North Pacific) | Portland, OR |
| REGION 6 (North Pacific) | Portland, OR |
| Washington and Oregon | |
| Cascade (Willamette-1933) | OR |
| Chelan | WA |
| Columbia | WA |
| Colville | WA |
| Crater (Rogue River-1932) | CA/OR |
| Deschutes | OR |
| Fremont | OR |
| Malheur | OR |
| Mount Baker | WA |
| Mount Hood | OR |
| Ochoco | OR |
| Olympic | WA |
| Rainier (to 1933) | WA |
| Rogue River | CA/OR |
| Santiam (Willamette-1933) | OR |
| Siskiyou | CA/OR |
| Siuslaw | OR |
| Snoqualmie | WA |
| Umatilla | OR/WA |
| Umpqua | OR |
| Wallowa | OR |
| Wenatchee | WA |

| Name | Location |
|---|---|
| Willamette | OR |
| Whitman | OR |
| DISTRICT 7 (Eastern, 1914-30) | Washington, DC |
| REGION 7 (Eastern, 1930-34)<br>Alabama, Arkansas, Florida, Georgia, Louisiana, Maine, Mississippi, New Hampshire, North Carolina, Pennsylvania, South Carolina, Tennessee, Vermont, Virignia, and West Virginia | Washington, DC |
| Ouachita | AR |
| Ozark | AR |
| REGION 7 (Eastern, 1934-41)<br>Connecticut, Delaware, Kentucky, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia | Washington, DC |
| DISTRICT 8 (Alaska, 1921-30) | Juneau, AK |
| REGION 8 (Alaska, 1930-34) | Juneau, AK |
| REGION 8 (Southern, 1934-41)<br>Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, and Texas | Atlanta, GA |
| Angelina | TX |
| Davy Crockett | TX |
| Kisatchie | LA |
| Ouachita | AR |
| Ozark | AR |
| Sabine | TX |
| Sam Houston | TX |
| DISTRICT 9 (Lakes States, 1929-30) | Milwaukee, WI |
| REGION 9 (Lakes States, 1930-34)<br>Michigan, Minnesota, and Wisconsin | Milwaukee, WI |
| Chippewa | MN |
| Superior | MN |

| Name | Location |
|---|---|
| REGION 9 (North Central, 1934-41)<br>Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, North Dakota, Ohio, and Wisconsin | Milwaukee, WI |
| Chippewa | MN |
| Clark | MO |
| Mark Twain | MO |
| Superior | MN |
| DISTRICT 10 (Alaska, 1934- ) | Juneau, AK |

## TABLE - 95.36
### Relevant Regional Publications Found in Central Office Records

| Title | Dates | National Forest |
|---|---|---|
| REGION 1: | | |
| Beartooth Forester | 1911-13 | Beartooth |
| Beaverhead Ranger | 1910-12 | Beaverhead |
| Blackfooter | 1911 | Blackfeet |
| Cabinet Quarterly | 1911-12 | Cabinet |
| Coeur d'Alene Forester | 1912-13 | Coeur d'Alene |
| Custer Cowboy | 1912-13 | Custer |
| Deerlodge Ranger | 1911-12 | Deerlodge |
| Gallatin Quarterly Record | 1912 | Gallatin |
| Kaniksu Ranger | 1911-12 | Kaniksu |
| Lewis and Clark Lookout | 1912 | Lewis and Clark |
| Madison Ranger | 1912 | Madison |
| Missoula Scout | 1911-12 | Missoula |
| Nezperce Newspiece | 1910-13 | Nezperce |
| Pend Oreille Coyote | 1912 | Pend Oreille |
| Selway Patrol | 1912 | Selway |
| The St. Joe | 1912, 1918 | St. Joe |
| REGION 2: | | |
| Colorado Trailblazer | 1913 | Colorado |
| Gunnison Ranger (typescript) | 1911-12 | Gunnison |
| Pike News | 1911 | Pike |
| Sopris Ranger | 1910 | Sopris |
| REGION 3: | | |
| Alamo Adviser | 1910-11 | Alamo |
| Apache News | 1911-18 | Apache |
| Carson Pine Cone | 1911-13 | Carson |
| Chiricahua Newsletter | 1911 | Chiricahua |
| Coconino Newsletter | 1911-12 | Coconino |
| Coronado Quarterly | 1911 | Coronado |
| Datil Try Monthly | 1911 | Datil |
| Gila Newsletter | 1911 | Gila |
| Jemez Forest Ranger | 1911 | Jemez |
| Lincoln Newsletter | 1910-11 | Lincoln |
| Manzano-Zuni Newsletter | 1911 | Manzano, Zuni |
| Pecos Quarterly | 1911-12 | Pecos |
| Prescott Newsletter | 1911 | Prescott |

| Title | Dates | National Forest |
|---|---|---|
| Sitgreaves Newsletter | 1911 | Sitgreaves |
| Tonto Quarterly | 1911 | Tonto |
| Tonto Trail | 1913 | Tonto |
| Tusayan News | 1911 | Tusayan |
| REGION 4: | | |
| Cache Ranger | 1911-17 | Cache |
| Echo (Cliffdweller's Echo) | 1911-12 | La Sal |
| Humboldt Forest Review | 1910-11 | Humboldt |
| Idaho Ranger | 1911 | Idaho |
| Lone Pine | 1911 | Kaibab |
| Nevada Ranger | 1910-11 | Nevada |
| REGION 5: | | |
| Cleveland Fire Fighter | 1912-13 | Cleveland |
| El Dorado Exchange | 1911-12 | Eldorado |
| Lassen Magazine | 1911-12 | Lassen |
| Modoc Review | 1911-12 | Modoc |
| Mono Ranger | 1911-12 | Mono |
| Plumas News | 1911 | Plumas |
| Sierra Ranger | 1911-12, 1918 | Sierra |
| Stanislaus Review | 1911-12 | Stanislaus |
| The Tahoe | 1911-13 | Tahoe |
| Trinity Forester | 1911 | Trinity |
| REGION 6: | | |
| Crater Ranger | 1911 | Crater |
| Fremont Tidings | 1911-12 | Fremont |
| Okanogan Forest Bulletin | 1912-16 | Okanogan |
| Olympic Forester | 1912 | Olympic |
| Siuslaw Bulletin | 1911-12 | Siuslaw |
| Washington Hatchet | 1911-12, 1916 | Washington |
| REGION 7: | | |
| Arkansas Forester | 1911-12 | Arkansas |
| Ozark Newsletter | 1911-12 | Ozark |

| Title | Dates | National Forest |
|---|---|---|
| REGION 8: | | |
| None | | |
| REGION 9: | | |
| Superior Ranger | 1910-12 | Superior |

# Record Group 97

## RECORDS OF THE BUREAU OF AGRICULTURAL AND INDUSTRIAL CHEMISTRY

*The analyses performed include a large number of mineral determinations, undertaken at the instance both of scientific men and explorers; assays of ores of the precious and other metals; analyses of soils, among which will be mentioned the alkaline soils from Nevada; marls, guano, marsh mud, peat, saline matters from the plains, artificial and natural fertilizers, not included in the above; wines, grapes; investigations made at the request of different States; proximate analyses of plants; cases of suspected poisoning, both of human beings and animals; Indian food materials; meat extracts; mineral waters; residues from the same; refuse from several manufactures; and lastly the answering of a large number of letters of inquiry from farmers, brewers, and other sources upon questions touching the industrial arts and manufactures connected with agriculture....*

*Besides the work already enumerated, the important investigation of the cereal crops...has been commenced. There have already been collected from various parts of the United States above seven hundred and fifty specimens, derived from over two hundred localities, of corn, wheat, rye, and oats, representing average crops in the several States and Territories, and raised under conditions so vastly different as regards climate, elevation, and soil, that the results of their examination may naturally be expected to lead to some insight into the effect of such conditions upon vegetable growth and nutritive value.*

*Thomas Antisell, Chemist,* Report of the Commissioner of Agriculture, *1870, pp. 91-92.*

### INTRODUCTION

**97.1** The Bureau of Agricultural and Industrial Chemistry, created in 1943, was the successor to several units of the Department of Agriculture that had been responsible for conducting investigations in agricultural chemistry and for regulatory work. The first of these units was the Division of Chemistry, which was established in 1862 under the authority of the act that created the Department of Agriculture. The early work of the Division consisted mainly of the analysis of soils, guanos, minerals, and wines for farmers and others; and the examination of postage stamps and canceling inks for the Post Office Department. From about 1880 to 1900 the Division conducted several sugar-producing experiments with sorghum, maize, cornstalks, and beets, in an effort to further the establishment of a domestic sugar industry. After Harvey W. Wiley became head of the Division in 1883, its investigations were broadened to include the analysis of food, drugs, and insecticides. The Division was also given responsibility for performing soil analysis work for the Division of Agricultural Soils (later known as the Bureau of Soils) following its creation in the Weather Bureau in 1894.

**97.2** The Division of Chemistry became the Bureau of Chemistry under provisions of an appropriation act of March 2, 1901, and during the next 25 years its functions grew in both research and regulatory areas. Research activities included (1) conducting research to improve processes used in the preparation of food and drugs for market and to develop methods to utilize byproducts of agricultural commodities; (2) studying the chemistry of plant growth to ascertain the effect of recognized plant food constituents, inorganic elements applied at different stages of growth, and light on the composition and physical characteristics of plants; (3) conducting investigations of tanning processes and manufacture of dyes; (4) carrying out experiments in waterproofing, mildewproofing, and fireproofing of fabrics; (5) performing research to discover the causes of and means of prevention of grain-dust explosions and fires in threshing machines, grain elevators, and mills; and (6) providing technical assistance to other Federal bureaus in operations requiring chemical analysis.

**97.3** Regulatory duties became an important part of the Bureau's work when it was charged with enforcing the provisions of the Food and Drugs Act passed in 1906. This act prohibited the importation, shipment in interstate or foreign commerce, and manufacture and sale in any Territory or the District of Columbia of adulterated or misbranded food and drugs. To enforce the act, the Bureau maintained inspection stations in several cities, where samples of food and drugs were examined. The Bureau's regula-

tory activity was broadened when the Secretary of Agriculture assigned to it the analytical work associated with the enforcement of the Insecticide and Fungicide Act of 1910, which prohibited the shipment in interstate commerce of any adulterated or misbranded insecticide or fungicide intended for sale.

**97.4** By July 1, 1912, the staff of the Bureau of Chemistry included one or more employees from every State west of the Mississippi River; food and drug inspection laboratories were located in Denver, CO, Galveston, TX, Kansas City, MO, New Orleans, LA, Omaha, NE, Portland, OR, St. Louis, MO, St. Paul, MN, San Francisco, CA, and Seattle, WA; and an experimental plant had opened in Los Angeles to test the production of citrus by-products. In the annual report for 1912, the Acting Chief of the Bureau discussed some of the numerous tasks undertaken by the laboratories. For example, commercial vanilla extracts were being studied in Denver; the effects of various bleaching agents on flour were being investigated in Kansas City; the number of importers who were selling olive oil adulterated with cottonseed oil as "pure" olive oil was being determined in New Orleans; and fruit-canning problems peculiar to California were being analyzed in San Francisco. A special investigation had also been carried out in the city of San Francisco to determine brewers' opinions on the proper raw materials to be used in the manufacture of beer.

**97.5** In 1927 the Bureau of Chemistry was divested of its regulatory duties, which were transferred to a newly created agency--the Food, Drug, and Insecticide Administration (renamed the Food and Drug Administration in 1930). The research work of the Bureau of Chemistry was combined with that of the Bureau of Soils and transferred to the newly created Bureau of Chemistry and Soils, which also incorporated those units of the Bureau of Plant Industry that handled soil bacteriology and soil fertility investigations. In 1938 the chemical research functions of the Bureau of Chemistry and Soils were consolidated with the major engineering research functions of the Bureau of Agricultural Engineering to form a new organization, the Bureau of Agricultural Chemistry and Engineering. As a result of another realignment of research functions in 1943, the Bureau of Agricultural Chemistry and Engineering became the Bureau of Agricultural and Industrial Chemistry.

**97.6** Most of the records discussed in this chapter are from the Division and the Bureau of Chemistry, 1862-1927; a few relating to dust explosions and spontaneous combustion include materials added by the Chemical Engineering Research Division of the Bureau of Chemistry and Soils. Most of the records constituting RG 97 are described in *Preliminary Inventory of the Records of the Bureau of Agricultural and Industrial Chemistry* (PI 149), Helen T. Finneran, compiler. Additional records have been added to the record group since the inventory was published in 1962, and those that are relevant are discussed below.

**97.7** Separate series of records of the Bureau of Chemistry pertaining to food and drug studies, legislation, and enforcement are in Record Group 88, Records of the Food and Drug Administration. That record group also includes records of the Board of Food and Drug Inspection, which was established in 1907 to act on all questions arising from the enforcement of the Food and Drugs Act of 1906. Record copies of publications of the Bureau of Chemistry are in Record Group 287, Publications of the U.S. Government. Records concerning chemical investigations of the Agricultural Division of the Patent Office and the general supervision of chemical work in the Department of Agriculture are in Record Group 16, Records of the Office of the Secretary of Agriculture. Also included are copies of letters prepared by the Bureau of Chemistry for the signature of the Secretary, 1906-29. These letters are reproduced as part of National Archives Microfilm Publication M440, *Letters Sent by the Secretary of Agriculture, 1893-1929* (rolls 244-271).

**97.8 Editorial Note**: Many records included in Record Group 97 originated after 1912, and they are not discussed in this chapter. Unless it is otherwise noted, series consisting of records that originated prior to 1913 but extending beyond that date are described here in their entirety; no attempt has been made to determine what portion relates to the pre-1913 period. Photographic records are usually filed apart from textual records and are generally identified by alphabetic collection designators shown in parenthesis instead of series titles. Cartographic records post-date 1913 and are not discussed here.

## TEXTUAL RECORDS OF THE DIVISION AND THE BUREAU OF CHEMISTRY

### CORRESPONDENCE AND RELATED RECORDS

**97.9** Extant correspondence of the Division of Chemistry for the 1860's and 1870's is fragmentary.

The subject matter of the correspondence, however, is revealed in many of the Chief Chemist's reports included in the annual and monthly reports of the Department of Agriculture published before 1880. These reports occasionally include extracts from the Division's correspondence, which dealt chiefly with the chemical analysis of agricultural, mineral, and other commodities. The names of persons submitting commodities for analysis and the reports of the analyses, 1862-78, are often to be found in the "Division of Chemistry" and "Laboratory" journals described below (97.10). The letters received and the letters sent by the Division (beginning in 1886 and 1878, respectively) were maintained and added to by the Bureau of Chemistry.

**97.10** Copies of letters received, 1862-63, and reports, 1864-67, were transcribed in chronological order in the **"Division of Chemistry Journal," 1862-67** (1 vol., 1 in.). The letters request the chemical analysis of products such as sorghum, molasses, cane sugar, and wine and of samples of minerals and soils. The reports, which were sent to the Commissioner of Agriculture, concern the chemical analysis of samples. The documents are indexed by name of writer. Chronologically arranged copies of letters and reports **("Laboratory Journal"), 1868-78** (1 vol., 1 in.), include statements showing the chemical analysis of soil, mineral, and other samples sent to the Department for examination.

**97.11 Letters received, ca. 1886-1907** (47 ft.), arranged alphabetically by name of correspondent, deal primarily with requests for chemical analysis of agricultural and other commodities and with the mounting interest in measures to ensure the use of pure food and drugs. Incoming **letters and reports ("Special File"), ca. 1886-1909** (18 ft.), pertain to special projects, official trips, and the professional activities of various officials, among them the Division and Bureau Chief, Harvey W. Wiley. Included are letters concerning Bureau regulatory activities and some published material on chemical research. These records are arranged by subject under a numerical scheme that includes headings for such topics as adulteration (73), American wine industry (88), artificial silk (87), inspection of imported foodstuffs (1-19), milk and milk products (58), New Orleans molasses (57), sardines (52), soil fertility (59), sugar beets and cane plants (44, 43), and wheat (53).

**97.12** Closely related to the incoming letters described above are the chronologically arranged press copies of **letters sent, 1878-1907** (216 vols., 22 ft.), concerning the activities of the Division and its successor, the Bureau of Chemistry. Included are discussions of research with State agricultural experiment stations; with food, chemical, and pharmaceutical concerns; and with private persons in the United States and abroad. Each volume contains a name index.

**97.13** Maintained as a separate series are press copies of **letters sent relating to the Louisiana Purchase Exposition (World's Fair), 1904** (1 vol., 1 in.), concerning the collection of samples for the Bureau's exhibit and exhibit space at the Exposition held in St. Louis, MO. The letters were written by W.D. Bigelow and Burton C. Howard, who were in charge of the Bureau's exhibit, and Bigelow's name is written on the spine of the volume. Also available are press copies of **letters sent relating to the World's Columbian Exposition, 1893** (1 vol., 1 in.), which was held in Chicago, IL. The letters were written by Harvey W. Wiley, who served as a juror on the Board of Awards for the agricultural exhibit. Within the volume the letters are arranged chronologically and indexed by name of correspondent. Additional records relating to these expositions are in Record Group 43, Records of International Conferences, Commissions, and Expositions; relevant records are described in *The Trans-Mississippi West, 1804-1912: Part I, A Guide to Records of the Department of State for the Territorial Period*.

**97.14 General correspondence, 1907-18** (798 ft.), mainly with chemists, Federal food and drug inspectors, and State food and drug enforcement agencies, concerns the analysis of foods, drugs, insecticides, and fertilizers; the development of research methods to determine the composition, manufacture, adulteration, and misbranding of foods, drugs, beverages, and disinfectants; and the Bureau's regulatory activities. Records are arranged by year and thereunder numerically. A "State Agencies" file heading was used for materials relating to Arkansas, Idaho, Iowa, Kansas, Louisiana, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. Also found are categories for "California Agricultural College," "Colorado State Normal School," and the Food and Drug Laboratory, Bureau of Chemistry, in Houston, TX. Access to the file is facilitated by two 3- by 5-inch card indexes. A **name index, 1907-18** (233 ft.), arranged alphabetically by name of correspondent, shows name and address of correspondent, date of letter, and file number; a **subject index, 1911-18**

(33 ft.), arranged alphabetically by subject, provides data similar to that given in the name index.

RECORDS RELATING TO EXPERIMENTS

**97.15** Experiments conducted by the Division and the Bureau are described in **bulletins, 1883-1913** (28 vols., 3 ft.), published by the Department of Agriculture. For the most part the publications are arranged by year and thereunder by number of bulletin, but some are arranged by subject: "Sugar Reports" (5 vols.); "Food Adulteration " (2 vols.); and "Influence of Food Preservatives and Artificial Color on Digestion and Health" (3 vols.). **Reports of analytical work, 1892-1900** (10 vols., 1 ft.), describe samples of soils, minerals, and foods that were examined by the chemists of the Division. In addition to a description of the sample, each report provides the date it was received, the sender's name, the name of the chemist making the analysis, the date of the report received by the Chief Chemist, and a general statement relating to the results of the analysis. The reports are arranged by numbers assigned to each sample.

**97.16** Experiments and research on sugar beets are documented by two series of records discussed here and by two volumes described in 97.18. Names and addresses of persons who received beet seed and who submitted the beets raised from the seed to the Division for analysis are listed in **records relating to beet seed distribution, 1891-93** (1 vol., 1 in.). **Newspaper clippings, 1897** (1 vol., 1 in.), arranged chronologically, concern the growth of the beet sugar industry and Harvey W. Wiley's efforts in its behalf.

**97.17** Experiments in the production of sugar from sorghum were conducted at experiment stations in the Midwestern States. Press copies of **letters sent relating to sorghum experiments, 1887** (1 vol., 1 in.), by the Division Chief to manufacturers, chemists, and the Secretary of Agriculture concern experiments conducted at Lawrence, KS; **letters sent relating to sorghum experiments, 1891** (1 vol., 1 in.), relate to the work of G.C. Spencer, a chemist of the Division of Chemistry, who was in charge of the experiments conducted at Medicine Lodge, KS. **Field notebooks relating to sorghum experiments, 1890-92** (42 vols., 2 ft.), kept at experiment stations in Sterling and Medicine Lodge, KS, contain the analytical results of the properties of the sorghum plots under cultivation; entries are arranged by plot number. Letters from 1893 regarding the stations in Kansas and Nebraska are found in a series of **miscellaneous correspondence, 1891-1908** (5 in.), arranged in rough chronological order.

**97.18** Sorghum experiments are also the subject of two of the many assorted volumes making up a series of **miscellaneous dockets, ledgers, and publications, 1889-1939** (5 ft.). Compiled in 1902, the notebooks are identified as "Agent's Note Book, Fort Scott Sugar and Sorghum Sirup Factory," and "Investigations in the Manufacture of Syrup From Sorghum Cane at the Farm and Factory of Mr. S.H. Kenny, Waterville, Minn." Also found in this series are a bound list of applicants for sugar beet seed, 1892 (1 vol., 1 in.), and a compilation by Harvey W. Wiley of Bureau of Chemistry Bulletins (Nos. 64, 74, 78, 95, 96), published in 1905 under the title "The Influence of Environment Upon the Composition of the Sugar Beet, 1900-1904" (1 vol.). The other publications in this series consist of three volumes of circulars: nos. 1-5, 7-29 (1894-1906); nos. 66-94 (1911-12); and nos. 95-115 (1912-13). Also included are typed transcripts (2 vols.) of hearings held in St. Louis, MO, in 1908, on I.S. (Interstate Shipment) cases concerning watered milk.

**97.19** Fifteen years of experiments in food adulteration are documented in **laboratory notebooks, 1890-1905** (22 vols., 11 in.), containing chemists' notes relating to the analysis of adulterants used in products such as flour, bread, honey, vinegar, whiskey, wine, milk, cranberries, breakfast foods, and canned corn and beans.

RECORDS RELATING TO ENFORCEMENT WORK

**97.20 Circulars and memorandums, 1908-23** (17 vols., 3 ft.), arranged chronologically, pertain to cases concerning adulterated and misbranded foods and drugs that were referred to the Solicitor of the Department of Agriculture and transmitted to the Attorney General for prosecution. Also included are lists of seizures made by the Bureau and lists of products that were examined at port laboratories and found not to comply with regulations. A **register of court cases, 1909** (1 vol., 1 in.), maintained by food inspectors, lists persons charged with violating the Food and Drugs Act. Each entry shows the product concerned, the manufacturer, the date of trial, and the disposition of the case. The entries are arranged alphabetically by name of inspector.

**97.21** Printed **forms relating to inspection of samples of imported foods, 1904-9** (5 vols., 5 in.),

signed by the Secretary of Agriculture and completed by the Bureau, direct the Secretary of the Treasury to obtain samples for analysis before permitting the foods to be released from the customhouses at ports of entry. Press copies of letters sent by the Secretary of Agriculture to the Secretary of the Treasury directing the release of samples of foods held in customhouses constitute the series called **letters sent relating to samples of imported foods, 1903-4** (4 vols., 5 in.). **Reports of tests on imported sugar, 1901, 1904** (2 vols., 2 in.), were used by the Treasury Department to determine duties on the sugar.

### Other Records

**97.22** Press copies of **articles and lectures by Harvey W. Wiley, 1890-1906** (11 vols., 11 in.), that were submitted to magazines and newspapers for publication pertain chiefly to food adulteration but also include reports of Bureau chemical investigations and professional scientific meetings. The volumes are indexed by subject. Manuscript and typewritten copies of **papers prepared for publication, 1911-27** (4 ft.), relate to chemical research. The papers, arranged alphabetically by name of author, were prepared by Bureau employees for publication in scientific journals.

## TEXTUAL RECORDS OF THE BUREAU OF CHEMISTRY AND SOILS

### General Records

**97.23 Laboratory Project Reports, 1901-38** (20 ft.), are arranged by name of laboratory or project. These periodic and special reports describe the nature, procedures, and results of laboratory work designed to find new processing methods and uses for farm products and to study chemical and technological aspects of foods and drugs.

**98.24** Leaflets, bulletins, circulars, and regulatory announcements make up a collection of **publications prepared by Bureau employees, 1884-1940** (14 ft.), dealing with investigations in agricultural chemistry and soils. These publications were issued in series devised by the Bureau and are arranged in groups according to publications series and thereunder by number. Also available are **published and manuscript copies of publications of the Bureau of Soils, ca. 1896-1927** (6 ft.), which include record copies of procedural issuances and reports of the Division of Soils, such as bulletins (1895-1901), circulars (1894-1900), field operation reports (1899-1900), and annual reports (1896-1901). Included, too, are copies of instructions, bulletins, and circulars issued by the Bureau of Soils, as well as record copies of the annual reports of the Chief of the Bureau of Soils, 1903-27. Also found here is an 1895 reprint of "Conditions in Soils of the Arid Region," a monograph by Milton Whitney, which originally appeared in the *Yearbook* for 1894.

### Records of the Chemical Engineering Research Division

**97.25** Investigations of dust explosions occurring during the handling and milling of grain were begun in the Bureau of Chemistry in 1914 under the direction of an engineer. In 1920 these investigations were placed in a new unit known as the Office of Development Work. When the Bureau of Chemistry and Soils was established in 1927, the work was continued by the Chemical Engineering Research Division, where it remained until 1940, when the Division was abolished. The original work of the Division and its predecessor units was concentrated on the development of protective measures against dust explosions in flour mills. Later the Division developed protective measures against dust explosions and fires in various industrial plants.

**97.26** The pertinent records of the Division consist of research materials. Chronologically arranged **clippings, 1893-1940** (73 vols., 12 ft.) from newspapers and magazines relate to dust explosions, spontaneous combustion, and methods devised to control farm and industrial plant fires. An undated **card record of dust explosions in the United States** (1 ft.), compiled on 5- by 8-inch cards, provides histories of dust explosions in industrial plants in the United States for the period 1854-1940. Each card gives the type, location, and date of the dust explosion; the name of the plant involved; and a brief account of the explosion. They are arranged alphabetically by the type of dust involved and thereunder chronologically.

### Records of the Industrial Farm Products Research Division

**97.27** The Industrial Farm Products Research Division was successor to several earlier units. Es-

tablished in the Bureau of Chemistry in 1902 as the Dendro-Chemical Laboratory, it was reorganized in 1904 and renamed the Leather and Paper Laboratory. By 1928 it had become known as the Industrial Farm Products Division, and in 1935 it became the Industrial Farm Products Research Division. Early work of the Division included investigations concerning raw material for leather manufacture; the production, properties, weighing, handling, grading, and uses of naval stores; and the promotion of the economical use of raw materials for papermaking. Later work of the Division included investigations pertaining to the properties and uses of leather and leather substitutes; the preparation of definite type samples; and the development of improved processes for producing naval stores.

**97.28** The **general correspondence, 1908-35** (10 ft.), of the Division, arranged alphabetically by subject, relates to all types of investigations conducted by the Industrial Farm Products Division and its predecessor unit, the Leather and Paper Laboratory. Much of the material concerns naval stores. **Records relating to committees, 1904-36** (3 ft.), consist mainly of correspondence and reports relating to the work of F.P. Veitch on Government and non-Government scientific committees, including those of the Association of Official Agricultural Chemists, the American Society for Testing Materials, the National Research Council, and the Federal Specifications Board. For many years Veitch was Chief of the Leather and Paper Laboratory and the Industrial Farm Products Division. The records are arranged alphabetically by subject.

### Records of the Naval Stores Research Division

**97.29** As early as 1893 the Division of Chemistry was conducting studies on rosin and turpentine. In 1903 these studies were directed by the Dendro-Chemical Laboratory and later by the Leather and Paper Laboratory and its successor, the Industrial Farm Products Division. Experiments in the tapping of western species of trees for the production of naval stores began in 1910. During the turpentine season of 1911, systematic experiments were conducted on western yellow pine in Arizona and Colorado, and in 1912 the flow from digger and Jeffrey pine in California was studied. In 1935 naval stores research was placed in a separate unit, the Naval Stores Research Division. The **correspondence of the Industrial Farm Products Division relating to naval stores research, 1903-35** (4 ft.), deals with administrative matters as well as with the scientific investigations conducted by the Division and its predecessor, the Leather and Paper Laboratory. The records are arranged by subject.

## PHOTOGRAPHIC RECORDS OF THE DIVISION AND BUREAU OF CHEMISTRY AND THE BUREAU OF CHEMISTRY AND SOILS

**97.30** Photographs, ca. 1878-1941 (G), collected or produced by the Bureau of Chemistry and the Bureau of Chemistry and Soils show agency personnel; dust explosions, including explosions at grain elevators, mills, and manufacturing plants; fires and fire prevention activities; laboratory tests; and exhibits. Photographs, ca. 1908-37 (MS), relate to Bureau of Chemistry and Soils research activities and investigations of dust explosions, boll weevils, the effects of smelter fumes, and methods of constructing safe turpentine stills. Also available are photographic negatives, ca. 1908-40 (NP), of images collected for use in publications of the Bureau of Chemistry, the Bureau of Chemistry and Soils, and the Bureau of Agricultural Chemistry and Engineering, the immediate predecessor of the Bureau of Agricultural and Industrial Chemistry. Some of the negatives show charts and graphs.

# Record Group 114

## RECORDS OF THE SOIL CONSERVATION SERVICE

*It is the function of soil-conservation research to discover the nature, causes, and effects of soil and water wastage under necessary farm practices and in relation to needful land use; to detect the symptoms of wastage in their incipient stages; to devise and test practical means and methods of control based upon scientific and technical studies; to lead in the restoration of wasted lands and the prevention of further waste; and to call to its aid appropriate branches of science related to the problem and invite into effective cooperation the agencies concerned in order that we progressively achieve a permanent agriculture.*

*W.C. Lowdermilk, Chief, Soil Conservation Research, in Foreword, "Soil and Water Conservation Investigations: Progress Report, 1930-35," SCS-ESR-3, July 1937.*

### INTRODUCTION

**114.1** The Jones-Dempsey Act of April 27, 1935, established the Soil Conservation Service in the Department of Agriculture to provide a permanent program for preventing and controlling soil erosion. In effect, this meant that the Soil Conservation Service superseded the Soil Erosion Service, an agency that had been transferred to the Department of Agriculture from the Department of the Interior only weeks before the passage of the Jones-Dempsey Act.

**114.2** In 1929 Congress had begun appropriating funds for the Department of Agriculture for soil erosion research that was being conducted by the Bureau of Chemistry and Soils and the Forest Service. No national conservation program was undertaken, however, until the National Industrial Recovery Act of 1933 provided for erosion control work as a means of unemployment relief. To carry out this relief program the Soil Erosion Service was established September 19, 1933, as a temporary agency in the Department of the Interior.

**114.3** The objectives of the Soil Erosion Service were to convince the public and farmers of the need to reduce water and wind erosion and to demonstrate ways that erosion could be controlled. To accomplish these objectives the Service established a series of erosion control demonstration projects in major regions of the country. The largest of these were on federally owned land in the Southwest; the remainder were on private land.

**114.4** On March 25, 1935, the Soil Erosion Service was transferred from the Department of the Interior to the Department of Agriculture. Within a week of the change of jurisdiction, the Soil Erosion Service acquired responsibility for erosion control experiment stations operated by other departmental bureaus, for the Emergency Conservation Work (ECW) camps performing erosion-control work on agricultural lands in national forests, and for plant nurseries that provided seeds and planting stock for revegetation. The ECW camps had been under the Forest Service, the experiment stations under the Bureau of Chemistry and Soils and the Bureau of Agricultural Engineering, and the erosion control nurseries under the Bureau of Plant Industry. A few weeks later the Soil Erosion Service was replaced by the Soil Conservation Service, a permanent agency with a more positive sounding name and a broader mission; the new Service was to be responsible for all soil erosion activities of the Department of Agriculture.

**114.5** Between 1935 and 1953, the substantive work of the Service was divided administratively between two subunits, the Office of Research and the Office of Operations. A cutback in research funds in 1948 and 1949 forced the termination of many research projects. In 1953 the remaining research functions were transferred from the Soil Conservation Service to the Agricultural Research Service, and the Office of Research was abolished.

**114.6** The Office of Research had been responsible for developing scientific projects designed to increase knowledge of soil erosion. These included investigations of the relationship between climate, rainfall, runoff, infiltration, ground water, and soil, and the extent to which eroded material was transported and deposited as sediment. Investigations were also

made of the destructive gullying process and of the microclimates of selected project areas. Special experimental watersheds were analyzed, and terraces, drainage, and vegetation were tested at experiment stations. Conservation economics was studied to determine the benefits and costs of conservation for the farmer.

**114.7** The Office of Research administered erosion control experiment stations (under the Conservation Experiments Division) and the Climatic and Physiographic, Hydrologic, Sedimentation, Hillculture, and Conservation Economics Divisions. Farm Drainage and Farm Irrigation Divisions were added in 1939. By May 1943, the Hydrologic, Sedimentation, and Farm Drainage Divisions had been consolidated into the Water Conservation and Disposal Practices Division; the Climatic and Physiographic, Hillculture, Conservation Economics, and Conservation Experiment Stations Divisions formed the Erosion Control Practices Division. The Farm Irrigation Division remained as a separate unit with headquarters at Logan, UT. After the 1953 loss of the research functions assigned to these and successor units, the Soil Conservation Service was primarily responsible for the field operations administered by the Office of Operations.

**114.8** The Office of Operations handled daily conservation activities in demonstration projects, soil conservation districts, land utilization projects, and other areas, including surveying, planning, and engineering work on farms and ranches. Most erosion control work was handled by a large field organization consisting of regional, area, State, and project offices. From 1938 to 1941, surveying and mapping work was separated from the Office of Operations to form a third major office known as the Office of Surveys and Project Plans, but after 1941 these functions were resumed by the Office of Operations.

**114.9** The Office of Operations administered those units responsible for agronomy; range, woodland, and wildlife management; engineering; plant nurseries; erosion control planning on individual farms and ranches in conjunction with demonstration projects and soil conservation districts; and other direct applications of soil conservation to the land. Whenever possible, the Office cooperated with the Office of Research in its field projects. After the research functions were transferred out of the Soil Conservation Service there was no need to differentiate between research and operations; the Office of Operations was abolished, but the work was continued by succeeding offices in charge of field services, soil surveys, and watersheds.

**114.10** The textual records and most of the cartographic records discussed in this chapter came from administrative units that were part of the Office of Research. These records were accessioned by the National Archives in 1959, by which time the units that had inherited, maintained, accumulated, or created them, had been defunct for nearly 20 years. Because the records were being held by the Division of Engineering at the time they were accessioned, they were identified as records of that division. In the discussion that follows, however, the textual and cartographic records have been attributed to the administrative units that appear to have been responsible for them in the early 1940's consolidation.

**114.11** Most of the records discussed in this chapter concern drainage and irrigation investigative functions that the Soil Conservation Service inherited from other agencies. Consequently, related materials can be found among the records of the agencies originally performing the functions. Of interest are textual records of the Office of Experiment Stations concerning irrigation and drainage investigations, which are found in Record Group 8, Records of the Bureau of Agricultural Engineering (the related cartographic records were transferred to the Soil Conservation Service and so are described in this chapter). Early records relating to soil investigations, including county soil survey maps dating from 1899, are in Record Group 54, Records of the Bureau of Plant Industry, Soils, and Agricultural Engineering. Record Group 16, Records of the Office of the Secretary of Agriculture, includes general administrative materials concerning all departmental units having soil- , drainage- , and irrigation-related functions.

**114.12** Federal agencies outside the Department of Agriculture also were involved in irrigation activities; early records can be found in Record Group 115, Records of the Bureau of Reclamation, and Record Group 48, Records of the Office of the Secretary of the Interior. Of interest also are the records of the Committee on Irrigation and Reclamation of Arid Lands, 1891-1946, in Record Group 46, Records of the U.S. Senate; and the records of the Committee on Irrigation of Arid Lands, 1893-1924, in Record Group 233, Records of the U.S. House of Representatives.

**114.13** As of this writing, no comprehensive finding aid covering all textual records of the Soil Conservation Service is available. Maps and closely

related records, however, are described in *Preliminary Inventory of the Cartographic Records of the Soil Conservation Service* (PI 195), compiled by William J. Heynen and published in 1981. This publication provides considerable administrative history as well as detailed descriptions of the cartographic materials. All of the cartographic records covered by the inventory, a fraction of which are discussed below, are maintained apart from the textual records.

**114.14 Editorial Note:** Most of the records constituting Record Group 114 originated after 1912, and they are discussed here only if they contain relevant early information. Unless otherwise noted, series consisting of records that originated prior to 1913 but extending beyond that date are described in their entirety; in most instances no attempt has been made to determine what part of such series relates to the pre-1913 period. This record group includes a large collection of separately maintained photographic records, some 58,000 items, but none of them pre-dates 1933. Because the Soil Conservation Service has always had an extensive network of field offices, records of field units are held by all of the National Archives Regions but Alaska. No field records are described here, however, because they originated after 1913.

## GENERAL RECORDS

**114.15** Numbered bulletins and circulars issued by the Office of Experiment Stations form part of the collection of **publications, 1897-1957** (23 ft.), maintained by the Soil Conservation Service. For the most part these records concern irrigation and drainage matters. One segment consists of State bulletins and other publications, 1910-51, resulting from Federal-State cooperation in irrigation and drainage work.

## RECORDS OF THE OFFICE OF RESEARCH AND PREDECESSOR UNITS

### Records of the Climatic and Physiographic Division

**114.16** The Climatic and Physiographic Division was established in 1935 to conduct scientific research aimed at discovering the interaction of climate and erosion, the stages of natural and culturally induced erosion, and the characteristics of erosional landforms. Originally, it was proposed that work would be undertaken in four major research areas: climate, geomorphology, erosion history, and plant ecology. Plant ecology studies, however, were not approved as a separate project and were carried out only peripherally.

#### Textual Records

**114.17** The records of the Division include an extensive collection of material compiled by the erosion history research project. The bulk of the records consists of **erosion history data cards, 1834-1922** (321 ft.), compiled by Works Progress Administration personnel under the direction of the Soil Conservation Service. These records constitute a body of research data regarding erosion control history with an emphasis on other aspects of agricultural history, such as climate, land utilization, weather, rural economics, and the like. The main body of data, contained on 5- by 8-inch cards arranged by State, consists of excerpts from various newspapers, farm journals and other periodicals, books, personal interviews, and congressional records, together with information gathered from State archives, the Extension Service and other Federal agencies, colleges, and the libraries and archives of historical societies. The time range covered is quite broad, extending from precolonial days to around 1940, with the bulk of the material falling within the period 1830-1925. The data for each State is recorded under seven major categories: A-Natural Conditions; B-Soil Erosion; C-Soil Conservation; D-Floods; E-Land Utilization and Population; F-Weather; and G-Addenda. Each category has several subheadings.

**114.18** In addition to this main group of cards are several supplementary segments, some of which are arranged according to broad geographic areas, such as the Southwest, the New England area, the Piedmont, etc. Other segments pertain to special problems or problem areas, such as erosion in river valleys and erosion problems found in foreign countries. Still others are arranged to reflect bibliographical material, listings of newspapers and periodicals that were consulted, foreign material, and to a limited extent, biographical material.

**114.19** Supplementing the cards are **erosion history and weather reports, 1936-40** (56 ft.), consisting of a modest amount of correspondence and reports regarding the methods used in collecting the information and copies of selected records from foreign archives and from other Federal agencies.

These materials are arranged numerically by item number. Of particular interest are items 104 through 233, which consist of excerpts from congressional records, diaries, reports of explorations and surveys, reports from Army personnel and Indian agents, scientific journals, and the archives of Mexico regarding the early history of the land and the people west of the Mississippi, chiefly the Southwest, during the period from approximately 1583 through the first decade of the 20th century. Included, for example, are the following: Item 132, Statistics for Indian tribes in the Southwest, 1866-1905, covering the number of acres under cultivation, the types and quantity of crops grown, and the number of horses, cattle, sheep, swine, and domestic fowl raised; Item 145, reports of the Secretary of War to Congress on early railroad surveys from 1846, 1853-55, and 1859; Item 150, miscellaneous bibliographies on the Southwest; Item 164, St. George Cook's report of a march from Santa Fe to San Diego, 1847; and Item 174, excerpts from Jacob Fowler's journal of a trip from Arkansas through the Indian Territory to the source of the Rio Grande del Norte, 1821-22. A complete list of the files is included in a processed "Index to the Records of the Climatic and Physiographic Division of the Soil Conservation Service," filed with the records.

**114.20** Also included in the series are files concerning over 600 virgin and near-virgin soil sites throughout the continental United States and Alaska, where, as nearly as could be ascertained, the soil was undisturbed by man. In the process of the project, about 1,000 questionnaires on soil erosion were sent to soil scientists, foresters, ecologists, botanists, and geographers. The replies, which together with some small maps are filed by State, were used for comparison in the measurement of the extent of soil erosion. The files are completed by lists of virgin soil sites, soil profiles of the Great Plains, and maps of the virgin soil areas of the Southeast.

**114.21** The records of the Division also include **"transpiration" journals, 1897-1922** (9 ft.), compiled at various experiment stations, recording data on the transpiration rates of plants. Only three stations west of the Mississippi are represented: Williston, ND, 1912; Dahlhart, TX, 1912; and Akron, CO, 1910-17. All three stations recorded data on alfalfa and wheat, but the Dahlhart journal also covered cotton, millet, and sorghum, and Akron reported on barley, corn, flax, millet, oats, and sudan grass.

**114.22** Climatic records maintained by the Division include **summaries of excessive precipitation, 1860-1931** (5 ft.), and **miscellaneous weather reports, 1875-1939** (11 ft.). The excessive precipitation summaries are statistical reports providing data compiled under the following headings: "Storm Period," "Daily Precipitation in Inches," and "Max. Precipitation." The summaries are arranged by numerical code, but the State, county, and collection station are clearly identified at the top of the form. The weather reports are statistical tables and oversize forms compiled for an analysis of temperature and precipitation rates and are arranged in rough alphabetical order by name of State.

Cartographic Records

**114.23** Maps and other records from the Climatic Section include **plotting sheets from climatic studies, ca. 1939-42** (approx. 1,500 items), consisting of large sheets of tracing paper on which numerical weather and climatic data have been plotted by hand. The sheets are arranged in three categories: (1) worksheets relating to precipitation-effectiveness (P-E), climatic regions based on P-E types for each year from 1900 to 1939, maximum and minimum precipitation, driest and wettest areas for July for each year from 1905 to 1935, and excesses and deficiencies of precipitation from 1889 to 1936; (2) temperature frequency worksheets; and (3) drought worksheets, showing statistics on seasons of maximum and minimum drought lengths, drought probability by month, and drought frequency at 1- , 2- , 3- , 5- , and 10-year intervals. Most sheets appear to be preliminary worksheets for C. Warren Thornthwaite's *Atlas of Climatic Types in the United States*, 1900-39, 1941, and for David Blumenstock's "Drought in the United States Analyzed by Means of the Theory of Probability," 1942. The records also include a copy of the published atlas and the **manuscript color plates used in the publication, 1941** (93 items), to illustrate climates each year from 1900 to 1939, based on the P-E categories that define superhumid, humid, subhumid, semiarid, and arid regions. An annual map and a map for the crop season, March-August, are found for each year.

**114.24** Another set of **color plates compiled from precipitation and drought plotting sheets, ca. 1940-42** (112 items), were probably used as color plates for publication, possibly in Blumenstock's study. These plates relate to excesses and deficiencies of precipitation each year from 1905 to 1935; maximum drought lengths each season of the year

from 1898 to 1937, according to various drought definitions; and drought frequency at 1- , 3- , 5- , and 10-year intervals.

**114.25** In 1934 the Soil Erosion Service began geomorphologic studies of the Polacca Wash, a 100-mile stream valley located within the Navajo-Hopi Indian Reservation of northeastern Arizona. The studies were continued by the Soil Conservation Service, and the cartographic records produced include maps showing precipitation in the Southwest on certain days in 1908, 1915, 1934, and 1939.

**114.26** Special studies relating to Oklahoma produced several series of maps replete with historical information. Manuscript maps, worksheets, and published **maps relating to Oklahoma geography and history, ca. 1932-36** (69 items), concern physical features, such as rock formations, rock types, and soils; the location of Indian tribes after 1887; land openings, 1889-1910; native and natural vegetation; climatic regions; crops; land under cultivation in 1884, 1889, 1907, and 1910; and population, including the number of tenant farmers in 1900, and the location of areas settled by people from Arkansas, Kansas, Missouri, and Texas. The records are arranged numerically by assigned number from 1 to 69. Tracing paper **maps based on documents of early explorers and surveyors, ca. 1936** (36 items), incorporate information from original maps and reports to reconstruct the natural vegetation and landscape before settlement by whites. Features shown include Indian villages, rivers, and notes on types of trees and grasses. Many of the tracings are colored in green and yellow to indicate areas of woodlands and prairie as reported by the explorers.

**114.27** Undated **small maps and graphs** (25 items) are letter-size county outline maps and graphs annotated with historical and agricultural information about Oklahoma. The graphs give county statistics on cattle in 1907 and 1908; the proportion of legumes and grasses to other crops in 1907; the acreage in Bermuda grass from 1907 to 1909; the acreage of artificial forest in 1907; the acreage of corn in 1908 and of wheat and cotton in 1909; the distribution of tenant farmers in 1910; and the percentage of farms operated by owners in 1910, 1920, and 1925. Small statistical graphs in color show the number of cattle that crossed Oklahoma from 1866 to 1885; the cattle, crop, lumber, and fur production of the Cheyenne-Arapaho and the Kiowa-Comanche-Wichita Indians from 1866 to 1900; and the number of buffalo in the Great Southern Herd killed from 1872 to 1874. One of the **county outline maps annotated with 1930 agricultural and economic information** (11 items) shows the equity of farmers in farms expressed as a percentage of the land value of all Oklahoma farms in 1910, 1920, 1925, and 1930.

**114.28** Manuscript **maps relating to annual climatic changes, 1911-30** (20 items), show annual changes in climatic region boundaries within Oklahoma, and two sets of **maps relating to annual population changes, 1909-34** (45 items), show annual population changes in Oklahoma, in units of 500, by dots placed in each county. The first set of 22 maps shows changes each year from 1909 to 1932; the second set covers the years 1910 to 1934.

**114.29** From October 1935 to mid-1937 the Kingfisher microclimatic project was conducted in west-central Oklahoma to determine local variability of rainfall and to interpret the effect of rainfall on erosion and agriculture. About 200 weather stations were established in Kingfisher, Blaine, and Logan Counties, with observers whose names were drawn from relief rolls and who performed the work on their own farms. Observations were taken hourly and sometimes, during storms, at 15-minute intervals, and the findings were plotted on maps, sometimes more than 80 times per day. Local physical, agricultural, and historical patterns of landscape were also mapped for comparison with weather maps. Among the manuscript maps and field sheets making up the **map file of C.F. Dohm, Kingfisher microclimatic project, 1935-37** (104 items), are 72 field reconnaissance sketch maps of local areas, showing native vegetation, rock outcroppings, houses, and other features. The remainder are maps and rough plotting sheets covering the entire project and relating to geology, vegetation, land use, house distribution (1892, 1935, and 1937), farm size (1896-1935), and wheat yield. Much of the information is plotted in detail on maps of individual sections within townships.

### Records of the Hillculture Division

**114.30** The Hillculture Division, which was responsible for research in the effective and profitable, use of vegetation to control soil erosion of hilly terrains, conducted highly technical and scientific studies relating to the selection and management of erosion-resisting vegetation. The hillculture experimental testing areas were established at various locations, and work was coordinated with other agencies and State agricultural experiment stations that were re-

sponsible for plant breeding and for developing new plant uses.

**114.31** Among the records of the Hillculture Division is a **card "catalogue," 1893-1944** (85 ft.), of publications relating to soil-conserving plants and vegetative methods suitable for hilly lands. The 3- by 5-inch index cards are arranged alphabetically by name of author or subject, ranging from "Anderson, Arthur" to "Zygadenus," a genus of herbs. Some of the cards include brief excerpts from the publications.

RECORDS OF THE SEDIMENTATION DIVISION

**114.32** Sedimentation research began under the Soil Erosion Service in 1934. When the Soil Conservation Service was established in 1935, a Section of Sedimentation and River Hydraulic Studies was created under the Division of Research. The general objective of the unit, usually referred to as the Sedimentation Division, was to provide information about the transportation and disposition of sediment after it had been washed off the land and to describe and map the accumulation of this sediment in critical areas of the United States. Measuring sediment as it accumulated at its resting place provided a method of estimating the amounts of soil eroded from the land.

Textual records

**114.33** The records of the Division include an **index to literature on sedimentation, 1861-1939** (22 ft.), on 5- by 8-inch cards arranged by classification numbers and thereunder alphabetically by author. The classification headings are given below:

A. General
- A-1 Instances of excessive erosion
- A-2 Rates of land surface reduction
- A-3 Mechanical analyzes of sediment

C. Transportation of Sediment by Flowing water
- C-6 Types of bed load and suspended load samplers
- C-7 Distribution of suspended load in cross sections
- C-8 Methods of measuring suspended loads of streams
- C-9 Total suspended- and dissolved-load determinations
- C-10 Factors affecting the sediment load of streams

Some of the cards contain brief excerpts of pertinent passages from the publications.

Cartographic records

**114.34** A number of surveys were conducted in the Los Angeles, CA, area following the flood of March 2, 1938. The resulting **records from sedimentation surveys following the 1938 Southern California Floods, 1938-40** (1,060 items), include maps showing dates and locations of forest fires north of Los Angeles, 1905-38 (items 157 and 159).

RECORDS OF THE FARM DRAINAGE DIVISION

**114.35** In January 1939 the Agriculture Department's drainage investigations program was transferred to the Soil Conservation Service, along with some textual records and the bulk of the related cartographic records. To handle the work, a Farm Drainage Division was established within the Office of Research. Departmental involvement in drainage work dated back to 1903, when the Department had begun conducting investigations and encouraging farmers to construct drainage ditches to improve agricultural yield in wet and swampy areas of the United States. The work had been assigned to the Irrigation Investigations unit of the Office of Experiment Stations, but in 1907 a separate Drainage Investigations unit was formed. In 1916 drainage and irrigation work was consolidated with other engineering functions into the Office of Public Roads and Rural Engineering (renamed the Bureau of Public Roads in 1918). This work was transferred in 1931 to the Bureau of Agricultural Engineering, where it remained until assigned to the Soil Conservation Service in 1939.

Textual Records

**114.36** Several series of records from the Farm Drainage Division contain information relating to the pre-1913 period. A relatively extensive set of **State project files, 1905-40** (64 ft.), arranged by State, consists of reports and other documents concerning specific geographic areas and projects within the States. The list given below of some of the topics in the Nebraska segment is typical of the kinds of subjects covered by the file:

1908 Logan Creek Valley
1908 Platte River Valley

1908 Salt Creek Valley
1908 Silver Creek Bottoms
1909 Specifications for drainage work in Nebraska
1910 Ashland Drainage District
1910 Dakota County Drainage District No. 2
1910 Jackson Ditch
1910 Nemaha River Valley
1910 Preliminary examination, Upper Elkhorn River Valley
1911 Cameron Ditch

Entries in a 3- by 5-inch card **index to the State project files, 1905-40** (3 ft.) are arranged by State and thereunder alphabetically by subject.

**114.37 Technical files, 1885-1943** (41 ft.), consist of reports, bibliographies, translations from foreign publications, and other reference materials, arranged according to a numerical classification scheme. There are 12 main classifications: 1-General Science; 2-Farm Management & Agricultural Economics; 3-Soils; 4-Fertilizers; 5-Crops; 6-Home Economics (not used); 7-Livestock; 8-Miscellaneous; 9-Livestock Products; 10-General Engineering; 11-Agricultural Engineering; and 12-Land Reclamation. Some classifications have several subheadings. Most of the records are filed under classification 12, with the 12.2221 segment covering drainage laws in the various States. Access is provided by means of a numerically arranged 3- by 5-inch card **index to the technical files, 1898- 1941** (5 ft.). A series identified as **drainage studies, 1907-39** (2 ft.), includes one 1908 document entitled "Report Upon Runoff of Drained Areas in Illinois and Iowa," which contains a section on tile drainage in Boone County, IA.

Cartographic Records

**114.38** Most of the cartographic records described below were inherited by the Soil Conservation Service from the Bureau of Agricultural Engineering and its predecessor agencies. Survey field notes and other textual records relating to the pre-1939 maps are among the Records of the Bureau of Agricultural Engineering (RG 8). Access to the pre-1939 maps is facilitated by a **card index to the drainage investigation numbered map file, 1903-41** (4 ft). The index, on 3- by 5-inch cards, is arranged in two segments: (1) a geographic index, arranged alphabetically by State and thereunder by name of farm, drainage district, county, or other unit; and (2) a subject index, arranged alphabetically. A typical card shows the subject of the report to which the map refers, the name of the drainage engineer or other author, and the map number. One of the entries in the subject index is "Missouri flood of 1903 (within the State of Missouri)." Other typical entries are Concrete pipe; Dams; Flow of water in flumes; Irrigation of orchards; Pumps; Rainfall; Sedimentation basins; Soil saving; Terrace models; Tile capacity; and Water measurements in open channels.

**114.39** The **drainage investigations numbered map file, 1903-41** (approx. 5,000 items), is arranged numerically by assigned number from 111-1 to 4183-49, with gaps, in accordance with textual reports with the same numbers. Composed of manuscript and photocopied maps, plans, profiles, charts, graphs, tables, and other oversize or graphic items, the file relates to all States except Alaska, Hawaii, and Rhode Island. Most of the records were created before 1939 by the Bureau of Agricultural Engineering and its predecessors, and most were prepared as illustrations for published reports created by the Office of Experiment Stations (1903-15) and the other agencies that, in turn, assumed responsibility for drainage investigations. Most of the items are maps of farms, drainage districts, counties, and other areas, showing facilities planned or constructed by drainage engineers; construction drawings and cross sections; and maps and graphs from studies conducted at erosion experiment stations and projects, including those at Bethany, MO; Clarinda, IA; Fort Hays, KS; Globe and Pima, AZ; Guthrie, OK; and Spur and Temple, TX.

**114.40** Typical of the records in this series are maps of the California Mesa in California; maps and profiles of the Cypress Creek Drainage District in Arkansas, including a general map of the area, a map showing watersheds, a map showing overflow areas, and profiles of proposed drainage districts; and maps of Jefferson County, TX, including a general map showing drainage facilities and a map showing proposed drainage districts. Other early items include a map of eastern Arkansas and northern Louisiana showing natural drainage investigations; a plan of the Cheyenne, WY, experimental farm; and maps and graphs from drainage surveys of the Red River Valley of the North. Several items mentioned in this paragraph were originally accessioned as records of either the Office of Experiment Stations (*see* RG 164) or the Bureau of Agricultural Engineering (RG 8) and were later consolidated with related records of the Soil Conservation Service to complete this file.

# Record Group 152

## RECORDS OF THE BUREAU OF DAIRY INDUSTRY

*The work for the development and improvement of dairying in the South has been continued, and similar work has been extended in the West. The object is to introduce dairying in new sections and to improve diary methods, including the breeding and feeding of the herds, as well as the handling of the milk. This work is being done in cooperation with State authorities and institutions. There is a particularly fine field for dairying in the irrigated regions of the West where alfalfa is produced. In the South and West 167 silos were built as a result of their advocacy by the department. A larger number are contemplated for the coming year. In some regions the silo is practically unknown, and when one is built it serves as an object lesson to the entire community.*

*James Wilson, Secretary of Agriculture*, Annual Reports of the Department of Agriculture, *1912, p. 48.*

### INTRODUCTION

**152.1** The Bureau of Dairy Industry, an agency of the Department of Agriculture from 1926 to 1953, originated as the Dairy Division of the Bureau of Animal Industry. The Division was established on July 1, 1895, to collect the information necessary to determine the magnitude, condition, and needs of the dairy industry and to inform persons engaged in the industry of ways to reduce production costs. By an act of Congress of May 29, 1924, the Division became the Bureau of Dairying, its chief function still being to collect and disseminate dairy information. On May 11, 1926, the name was changed to the Bureau of Dairy Industry. In 1942 the Agricultural Research Administration was created and given administrative jurisdiction over several scientific bureaus of the Department of Agriculture, including the Bureau of Dairy Industry. Eleven years later the Bureau was abolished and its functions transferred to the newly created Agricultural Research Service.

**152.2** By the time it was abolished, the Bureau had gained recognition as one of the most important dairy research organizations in the world. Since its sole regulatory function had been the inspection of factories making renovated butter, it had been able to devote most of its activities--about 90 percent--to research, including investigations regarding the breeding, feeding, and management of dairy cattle; the improvement of the quality and production of milk, milk products, and byproducts; and the utilization, distribution, and marketing of these products. Many Bureau activities had been carried out at experiment stations located in various parts of the country and at experimental farms maintained in Maryland and Pennsylvania.

**152.3** The account of the work of the Bureau's predecessor, the Dairy Division, that appears in the 1912 annual report of the Chief of the Bureau of Animal Industry depicts an organization that was active on many fronts. During the reporting year Division representatives had attended over 650 public meetings, including national, State, and local fairs; international, national, and State conventions; farmers' institutes and short courses in dairying; local meetings of farmers and business people; creamery meetings; market milk meetings; and butter-scoring contests. As part of their many duties, Division employees had helped organize 14 live-stock associations; form a Guernsey breeders' association in Colorado and a bull association in North Dakota; and establish cow-testing associations in Iowa, Minnesota, and Washington. Field staff had performed demonstration work in Colorado, Idaho, Iowa, and North Dakota, made monthly visits to creameries in California, Iowa, Minnesota, and Texas, and worked a Dairy Demonstration Farm near Denison, TX. Division employees had also inspected butter in markets in San Francisco, CA; joined investigations of milk secretion conducted at Columbia, MO, in cooperation with the University of Missouri Agricultural Station; and conducted studies at Brownsville, TX, to determine the value of cactus as feed for dairy cattle in certain localities.

**152.4** The Division also prepared bulletins, circulars, leaflets, and other publications concerning general dairy subjects and assembled material for presentation at dairy exhibits, State fairs, and national expositions and shows.

**152.5** The records of the Bureau are described in a preliminary inventory in the National Archives microfiche edition of preliminary inventories (1986). The records discussed in this chapter, which date from 1907, originally constituted the Dairy Division segment of the central files of the Bureau of Animal Industry. These records were transferred to the newly created Bureau of Dairying in 1924, but some earlier records of the Division are still part of files in Record Group 17, Records of the Bureau of Animal Industry. Record copies of Dairy Division publications are among those of the Bureau of Animal Industry in Record Group 287, Publications of the U.S. Government. Other related records are in Record Group 16, Records of the Office of the Secretary of Agriculture, which includes correspondence concerning the general supervision of the Bureau's activities.

**152.6 Editorial Note**: Record Group 152 consists solely of textual records documenting the work of the Dairy Division of the Bureau of Animal Industry, the Bureau of Dairying, and the Bureau of Dairy Industry. Although much work of the Bureau and its predecessors was conducted in the field, no field records are held by the National Archives regional archives. Most records in Record Group 152 originated after 1912, and they are not discussed here.

## RECORDS OF THE DAIRY DIVISION, BUREAU OF ANIMAL INDUSTRY

**152.7** The records that are described in this chapter constitute one of two series of similar records taken from the central files of the Bureau of Animal Industry. Each series covers a distinct time period, 1907-22, and 1922-24, and each series is arranged by a different classification scheme. Only the earlier series, which is pertinent to the time frame of this guide, is discussed here.

**152.8 The correspondence and other records, 1907-22** (23 ft.), are arranged under a numeric-subject classification system used by the Bureau of Animal Industry. Five of the seven basic subject headings used for this series cover records predating 1913:

| | |
|---|---|
| 401.5 | International Dairy Federation Congresses (1907-22); |
| 415.3 | publications (1912-21); |
| 416.1-416.4 | reports (1908-22); |
| 421.0 | purchase of cattle (1912); and |
| 427-477 | Experiment Stations (1907-22). |

The records consist of correspondence, reports, and agenda relating to the Division's participation in international dairy congresses; correspondence and editorial comments concerning proposed publications; correspondence relating to assistance given private persons and institutions in purchasing cattle; correspondence and reports that were received from various stations, farms, and creameries; annual reports sent to the head of the Bureau of Animal Industry by individual field and research workers, section chiefs, and Chiefs of the Dairy Division; special reports on various phases of the Division's work; and cooperative agreements whereby a cooperative creamery and cheese factory were acquired for experimental purposes.

# Record Group 164

## RECORDS OF THE COOPERATIVE STATE RESEARCH SERVICE [OFFICE OF EXPERIMENT STATIONS]

*There is abundant evidence that in several States the farmers themselves are beginning to give the experiment stations a large share of credit for improved conditions of agriculture. One indication of this is found in the greater demands made upon the stations by the farmers for advice and assistance, but a stronger mark of approval is found in the recent liberal [State] appropriations for the investigation of special problems of more or less local application. Noteworthy among the appropriations of this nature now being used by the stations are the following: ...California, $60,000 for the study of plant diseases and the improvement of wheat; ...Utah, $25,000 for experiments in arid farming, irrigation, and drainage; ...Minnesota, $10,000 for plant breeding and soil investigations; North Dakota, $9,000 for investigating the milling qualities of wheat and for inspection work; and Colorado, $7,000 for work with live stock, grains, forage crops, and root crops.*

*A.C. True and Dick J. Crosby, "Summary,"* Annual Report of the Office of Experiment Stations, 1905, *p. 16.*

### INTRODUCTION

**164.1** The Cooperative State Research Service, established in 1981, is a descendent of the Office of Experiment Stations, established nearly 100 years earlier. The Office of Experiment Stations was established in the Department of Agriculture on October 1, 1888, to represent the Commissioner (now Secretary) of Agriculture in his relations with the agricultural experiment stations created under the Hatch Act of March 2, 1887. The act provided for the establishment of an experiment station under the direction of each land-grant college in the States and Territories and authorized an annual appropriation of $15,000 to each qualifying State or Territory to pay the expenses of conducting experiments and investigations and of printing and distributing the results. Additional funds were provided by the Adams Act of March 16, 1906, as well as by acts passed in 1925, 1935, and 1946, and supplemental legislation. These acts were consolidated and amended by an act of August 11, 1955.

**164.2** Originally the Office of Experiment Stations was to provide advice and assistance to the stations and to collect and disseminate information concerning their work. The principal activity was the preparation of publications, including the *Experiment Station Record* (a journal published from 1889 until 1946), bulletins, circulars, and a card index to experiment station literature. Members of the staff also visited stations and corresponded with them, and engaged in other promotional activities. The Office worked closely with the Association of American Agricultural Colleges and Experiment Stations (more recently known as the Association of Land-Grant Colleges and as the American Association of Land-Grant Colleges and Universities).

**164.3** The Office of Experiment Stations acquired some control over the expenditures and activities of the stations in 1894, when Congress passed an act providing that the Secretary of Agriculture should prescribe the form of annual financial reports submitted by the stations. The 1906 Adams Act and later acts established requirements to qualify for funds. The enforcement of these requirements by the Office of Experiment Stations increased its control over station work.

**164.4** An experiment station was established in Alaska in 1898. By 1909 stations had been established in Hawaii, Puerto Rico, and Guam. These stations--known collectively as insular stations--were not part of the Hatch Act program but were instead administered directly by the Office of Experiment Stations through a Division of Insular Stations. Eventually the Hatch Act was extended to cover most of the insular stations. Others were closed or were transferred to another authority. After 1938 only the station at Mayaguez in Puerto Rico was under the direct supervision of the Office of Experiment Stations.

**164.5** The Office of Experiment Stations assumed other duties in addition to experiment station work. It undertook special investigations concerning nutrition, irrigation, and drainage, and it investigated and promoted agricultural instruction in schools and farmers' institutes. The farmers' institutes had come into

being about 1852, and State agencies had begun to sponsor them as a chief means of carrying on extension work, a term applied to the teaching of techniques of agriculture and home economics to farmers and their families. The Office of Experiment Stations was quick to recognize the potential value of the institutes in disseminating the results of its station experiments. Within a year of its establishment the Office had begun collecting data on the institutes, and in 1903 a farmers' institute specialist was added to the Office staff. The Office continued its interest in the farmers' institutes until about 1910, when newer types of extension work began to displace them.

**164.6** After 1914 the increasing importance of extension activities impelled a reorganization of the Department of Agriculture, resulting in a change of status for the Office of Experiment Stations. Divested of some of its secondary responsibilities and with its functions limited solely to experiment station work, the Office was made part of the newly established States Relations Service. Its responsibilities for irrigation and drainage investigations were transferred first to the Office of Public Roads and Rural Engineering and subsequently to the Bureau of Agricultural Engineering, and its extension activities and its work on nutrition were allocated to several other offices within the States Relations Service. The former Director of the Office of Experiment Stations became the Director of the States Relations Service, and the former Assistant Director became the Chief of the reduced Office of Experiment Stations.

**164.7** The States Relations Service was abolished in 1923, and the Office of Experiment Stations was again made a separate office. From 1936 until 1941, the Chief of the Office of Experiment Stations also served as Director of Research for the Department. When the Secretary of Agriculture established the Agricultural Research Administration, the Office of Experiment Stations was placed under its jurisdiction. This situation lasted from 1942 until 1953, when the Office was abolished and its functions transferred to the newly created Agricultural Research Service. Between 1953 and 1981 experiment station work was conducted by several different administrative units and agencies. In 1981 the Cooperative State Research Service was established to administer the acts of Congress authorizing Federal appropriations for agricultural research carried on by the State agricultural experiment stations.

**164.8** Most of the records of the Office of Experiment Stations discussed in this chapter were in the National Archives in 1965, and they are described in the informal "Preliminary Inventory of the Records of the Office of Experiment Stations" (NC-132), which was compiled by Edward E. Hill. Since that time additional series relevant to this guide have been accessioned, and they are described below. Record copies of publications that were issued by the Office of Experiment Stations are a part of Record Group 287, Publications of the U.S. Government.

**164.9** Closely related records are found in other record groups. Record Group 16, Records of the Office of the Secretary of Agriculture, contains records concerning the general supervision of the Office of Experiment Stations by the Secretary's Office. Included are copies of letters prepared by the Office of Experiment Stations for the signature of the Secretary, 1906-15 and 1923-29. These letters are reproduced as part of National Archives Microfilm Publication M440, *Letters Sent by the Secretary of Agriculture, 1893-1929* (rolls 279-281). Textual records created by the Office of Experiment Stations concerning irrigation and drainage investigations are in Record Group 8, Records of the Bureau of Agricultural Engineering. Cartographic records concerning the investigations, as well as some related textual records and copies of bulletins and circulars issued by the Office, are in Record Group 114, Records of the Soil Conservation Service. Records of the Agricultural Experiment Station, University of Idaho, held by the National Archives--Pacific Northwest Region, Seattle, WA, are part of Record Group 310, Records of the Agricultural Research Service. Included are rain and stream gauge charts, 1906-36, from stations near Dayton, WA, Emmett, ID, Newburg, OR, and Watsonville, CA.

**164.10 Editorial Note:** Many records that are included in Record Group 164 originated after 1912, and they are not discussed in this chapter. Unless otherwise noted, series consisting of records that originated prior to 1913 but extending beyond that date are described in their entirety; no attempt has been made to determine what part of such series relates to the pre-1913 period. No separate collection of photographic records exists for this record group, and cartographic records created by the Office postdate 1912.

## General Records

**164.11** Correspondence files constitute the bulk of the records of the Office of Experiment Stations.

**General correspondence, 1888-1923** (67 ft.), is arranged in alphabetical segments, thereunder by chronological periods of varying length, and thereunder alphabetically by name of correspondent. Access is facilitated by **card indexes to the general correspondence and other records, 1883-1943** (58 ft.), arranged in three chronological periods: 1888-1906, 1907-37, and 1936-43 (including some earlier cards). Each chronological segment is arranged alphabetically by subject.

**164.12 General correspondence with the Office of the Secretary of Agriculture, 1899-1932** (16 ft.), is divided into two parts: (1) correspondence with the Secretary and his immediate staff, arranged by periods of time of varying length; and (2) correspondence with administrative units, arranged in alphabetical order by name of unit or of position of person in charge. A separate series consists of **general correspondence with Bureaus of the Department of Agriculture, 1899-1932** (9 ft.), arranged alphabetically by name of Bureau and thereunder in various appropriate ways. Included is pre-1913 correspondence with the Bureaus of Biological Survey, Chemistry, Entomology, Plant Industry, Public Roads, and Soils, as well as with the Weather Bureau and the Forest Service.

**164.13** Dealings of the Office of Experiment Stations with Federal offices outside the Department of Agriculture are documented in **general correspondence and other records concerning relations with other agencies, 1888-1932** (11 ft.). These records are arranged alphabetically by name of agency and thereunder in various appropriate ways, with records concerning Bureaus of a Department filed with those relating to that Department. Among the agencies involved are the Department of the Interior and its components, Congress, the Library of Congress, the Navy and War Departments, the Treasury Department, and the White House.

**164.14** Early correspondence with the experiment stations is divided between two series, both arranged alphabetically by name of State. Each State segment of the **general correspondence with State experiment stations and agricultural colleges, 1888-1937** (29 ft.), is arranged by chronological periods of varying length and thereunder either alphabetically by name of correspondent, chronologically, or in some other appropriate way. The **general correspondence with State experiment stations and agricultural colleges relating to administration and policy and to accounts, 1907-32** (7 ft.), is arranged by the two subjects indicated in the series title and thereunder chronologically.

**164.15** The Office also maintained a file of **general correspondence and other records concerning associations, ca. 1900-37** (7 ft.), which is arranged for the most part alphabetically by name of association and thereunder chronologically. Included is pre-1913 correspondence with only a few associations, among them the American Association for Advancement of Agricultural Teaching, the International Congress of Agricultural Education, and the International Institute of Agriculture.

**164.16** Office activities regarding exhibits at expositions are documented by **correspondence and other records concerning expositions, 1903-33** (1 ft.). Included are small quantities of correspondence relating to the following: the 1904 Louisiana Purchase Exposition at St. Louis, MO; the 1905 Lewis and Clark Exposition at Portland, OR; and the 1909 Alaska-Yukon-Pacific Exposition at Seattle, WA. Related records can be found in Record Group 43, Records of International Conferences, Commissions, and Expositions, which is discussed in *The Trans-Mississippi West, 1804-1912: Part I, A Guide to Records of the Department of State for the Territorial Period* (1993).

**164.17** Several series of records document the administrative functions of the Office. A series of general **administrative records, 1894-1937** (14 ft.), is arranged alphabetically by subject or kind of record and thereunder in various ways. The subjects covered include accounts, irrigation and drainage investigations, circular letters, financial reports, general orders and memorandums, inspection reports, and project agreements. Printed **annual financial reports of stations, 1907-46** (15 ft.), provide a breakdown of expenditures under both the Hatch and Adams Acts. Most of the reports are arranged alphabetically by name of State or Territory and thereunder chronologically. A few reports are dated as early as 1895.

**164.18 Annual inspection reports, 1906-73** (61 ft.), submitted by staff specialists, are arranged in several chronological segments, of which only the first (1906-34, 14 ft.) is relevant. Each segment is arranged alphabetically by name of State or Territory and thereunder chronologically. Staff specialists visited the State experiment stations annually to ensure that Federal grant projects were being conducted properly in accordance with the plan of work, method of procedure, and allotment of funds. The specialists also offered sympathetic encouragement to the station

staffs and assisted them in resolving problems and in planning future research. The specialists presented their findings, comments, and recommendations in the form of annual inspection reports.

**164.19** The inspection reports usually discuss general conditions at the stations, improvements made, staff attitude, and personnel changes, but the main body of the reports concerns the research funded by Federal funds. Non-Federal projects usually are discussed only briefly. The 1907 report for Colorado, for example, is divided into sections for the "Adams fund" and the "Hatch fund." The following subjects are discussed under the "Adams fund" heading: entomology, irrigation, chemistry, horticulture, agriculture, and agronomy. Topics listed under the "Hatch fund" heading are entomology, irrigation, agriculture, agronomy, agriculture/animal husbandry, and veterinarian. Reports are sometimes illustrated with photographs and related correspondence is occasionally included.

**164.20** Some subseries of the **miscellaneous records relating to the administration and allocation of Federal funds, ca. 1887-1957** (2 ft.), are relevant and merit discussion.

1. State assent files, 1888-1938 (1/3 in.), arranged alphabetically by name of State, document the acceptance by the States or Territories of the provisions of various acts, including the Hatch and Adams Acts, authorizing the use of Federal grant funds in connection with the operations of State experiment stations. These records were apparently collected in 1938 and are not always complete. A file at the beginning of the series contains valuable historical information on the assent and organization dates for State and Territorial experiment stations.

2. Quarterly certifications of station allotments, 1909-37 (2 in.), consist of letters from the Secretary of Agriculture to the Secretary of the Treasury certifying, as required by Congress, that the State experiment stations were entitled to quarterly installments of Federal funds. Attached to the letters are tables listing the stations, the amount of money they were to receive under the various acts, and the designated recipient of the funds.

3. A revised edition of an early agency publication of opinions and rulings regarding Federal grant funds, 1887-1957 (ca. 1 ft.), provides short abstracts of selected rulings and opinions concerning the administration and allocation of Federal grant funds and includes references and an index.

**164.21** Two other series of general records have some peripheral relevance. **Case files of a survey of ash constituents and nitrogen of farm plants and products, 1902-6** (1 ft.), document an early and extensive scientific study by the Office, showing its survey techniques and the available data sources, including State publications. The records consist almost entirely of forms providing data on "Substance" (e.g., rice bran), "Water," "Ash," "Nitrogen," and "Potash." Included as well are a few notes and a small quantity of correspondence relating to attempts to secure the data. Apparently no report resulted from the survey, but evidence suggests that data in the files were used by the Office as late as the 1930's. **Completed registration forms and other records concerning the Agricultural Science Register, 1904-26** (6 ft.), provide information on persons interested in teaching or investigative positions in agriculture and related fields. The records are arranged for the most part by chronological periods of varying length and thereunder alphabetically by name of registrant.

## Records Relating to Publications

**164.22** Several series of records concern publications of the Office. Among them are **annual reports, bulletins, and other publications, 1889-1928** (1 ft.); **articles and addresses, 1898-1922** (6 in.), arranged chronologically; a **"card index of experiment station literature," 1890-1921** (47 ft.), consisting of subject abstracts on printed cards arranged for the most part by a number assigned in the order of issuance; and a **manuscript for the Handbook of experiment station work, ca. 1898-1902** (1 ft.). A collection of **data slips for a proposed index to proceedings of the Association of American Agricultural Colleges and Experiment Stations** (10 in.) for the years 1889-1906 is accompanied by a 1917 letter explaining the project. The slips are arranged in rough chronological order by date of proceedings.

**164.23** Also included are **notes and a manuscript of Alfred Charles True, ca. 1923-29** (2 ft.), for a "History of Agricultural Experimentation and Research in the United States," as well as notes for his *History of Agricultural Education in the United States, 1785-1925* (1929). The notes are arranged for the most part by subject. Dr. True was Director of the Office of Experiment Stations from 1893 until 1915, Director of the States Relations Service, 1915-23, and Specialist in States Relations Work from 1923 until his death in 1929. Some of his corre-

spondence is among the office files which are discussed below.

OFFICE FILES

**164.24** The **correspondence of Alfred C. True, 1893-1929** (2 ft.), is arranged by chronological periods of varying length and thereunder for the most part alphabetically by name of correspondent. Much of the correspondence is marked "personal" or "confidential." True's Assistant Director from 1893 to 1915 was Edwin W. Allen, who became Chief of the Office of Experiment Stations when it was made part of the States Relations Service. Allen's **personal correspondence, 1910-29** (6 in.), is arranged alphabetically by name of correspondent or by name of the person who was the subject of the letter. Also arranged alphabetically by name of correspondent, for the most part, is a small file of Allen's **correspondence as secretary-treasurer of the Society for the Promotion of Agricultural Science, 1910-41** (3 in.).

**164.25** Charles C. Georgeson was in charge of the experiment station at the Kansas State Agricultural College during the years 1891-97. Later he transferred to Alaska, where he supervised experiment station work in that Territory during the period 1900 to 1920. Press and carbon copies of his **personal letters sent, 1891-97, 1900-20** (2 vols. and unbound papers, 2 in.), are in the custody of the National Archives--Alaska Region, Anchorage, AK. The letters are arranged for the most part chronologically.

# APPENDIX A

## National Archives Microfilm Publications Cited

M95 Records of the Office of the Secretary of the Interior Relating to Wagon Roads, 1857-1887.*

M122 Letters Sent by the Assistant Secretary of Agriculture, 1889-1894.

M236 A Microfilm Supplement to the Territorial Papers of the United States: Wisconsin, 1836-1848.

M325 The Territorial Papers of the United States: Iowa, 1838-1846.

M440 Letters Sent by the Secretary of Agriculture, 1893-1924.

M721 *The Territorial Papers of the United States.**

M840 Expedition Reports of the Office of Foreign seed and Plant Introduction of the Department of Agriculture, 1900-1938.

M864 Letters Received by the Bureau of Entomology From W.D. Hunter, May 5, 1902-Nov. 23, 1908.

M1025 Minutes of the Service Committee of the Forest Service, Mar. 14, 1903-Oct. 16, 1935.

M1049 The Territorial Papers of the United States: Oregon, 1848-1859.

M1050 The Territorial Papers of the United States: Minnesota, 1848-1858.

M1127 General Photographic File of the U.S. Forest Service, 1886--.

M1128 Shelf List of Captions for the General Photograph File, U.S. Forest Service.

M1379 Selected Records From Records of the Weather Bureau Relating to New Orleans, 1841-1907.

T848 Extension Service Annual Reports: Arkansas, 1909-1944.

T860 Extension Service Annual Reports: Iowa, 1912-1944.

T863 Extension Service Annual Reports: Louisiana, 1909-1944.

T879 Extension Service Annual Reports: North Dakota, 1912-1944.

T881 Extension Service Annual Reports: Oklahoma, 1909-1944.

T890 Extension Service Annual Reports: Texas, 1909-1944.

T907 Climatological Records of the Weather Bureau, 1819-1892.
(A complete set of this publication is available at the National Archives--Southwest Region, Fort Worth, TX. Other regional archives hold rolls for some or all of the States in their regions. Copies of the rolls for Minnesota are held by the National Archives--Great Lakes Region, Chicago, IL.)

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* Asterisks identify publications available at all regional archives. Of these, only M721 is available at National Archives--Pittsfield Region.

# APPENDIX B

## List of Regional Archives

- **National Archives--New England Region**
  380 Trapelo Road
  Waltham, MA 02154

- **National Archives--Pittsfield Region**
  100 Dan Fox Drive
  Pittsfield, MA 01201
  (No accessioned records, only microfilm related to genealogy)

- **National Archives--Northeast Region**
  201 Varick Street
  New York, New York 10014

- **National Archives--Mid Atlantic Region**
  900 Market Streets, Room 1350
  Philadelphia, PA 19107

- **National Archives--Southeast Region**
  1557 St. Joseph Avenue
  East Point, GA 30344

- **National Archives--Great Lakes Region**
  7358 South Pulaski Road
  Chicago, IL 60629

- **National Archives--Central Plains Region**
  2312 East Bannister Road
  Kansas City, MO 64131

- **National Archives--Southwest Region**
  501 West Felix Street, P.O. Box 6216
  Ft. Worth, TX 76115

- **National Archives--Rocky Mountain Region**
  Building 48-Denver Federal Center
  Denver, CO 80225-0307

- **National Archives--Pacific Southwest Region**
  24000 Avila Road
  Laguna Niguel, CA 92656

- **National Archives--Pacific Sierra Region**
  1000 Commodore Drive
  San Bruno, CA 94066

- **National Archives--Pacific Northwest Region**
  6125 Sand Point Way NE
  Seattle, WA 98115

- **National Archives--Alaska Region**
  654 West Third Avenue
  Anchorage, AK 99501

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